

September/October 2010
Volume 36, Number 2



A Publication of
National
Stereoscopic
Association, Inc.

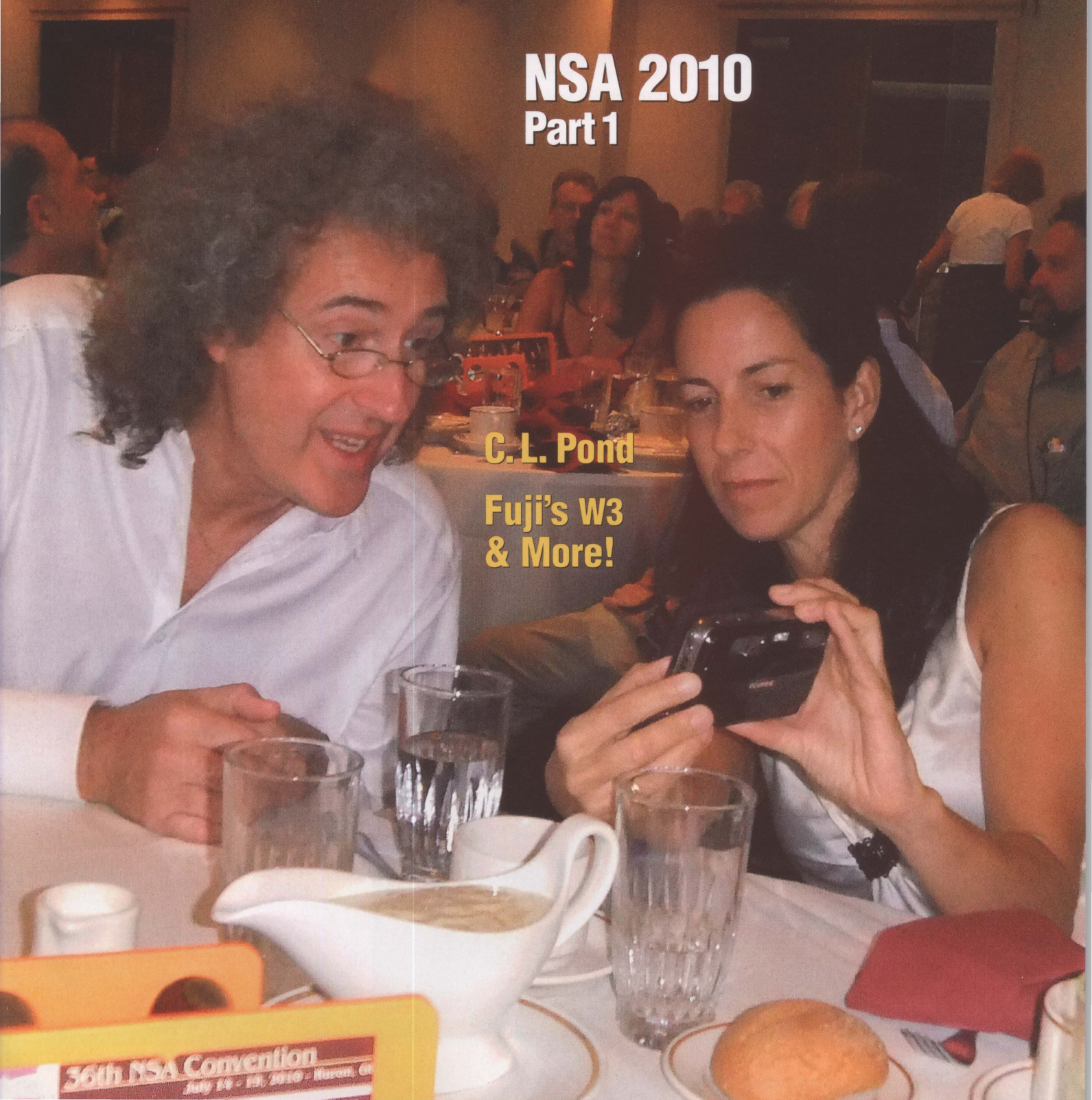
3-D Imaging Past & Present

STEREO WORLD

NSA 2010
Part 1

C.L. Pond

**Fuji's W3
& More!**



36th NSA Convention
July 14 - 19, 2010 - Huron, OH

'50s Flavored Finds

A taste of the late '40s through the early '60s found in amateur stereo slides

by Mark Willke

Return to the Grocery Store

Back in the Vol. 31, #1 issue I shared a couple View-Master-format images of grocery store

interiors from a group of Personal reels I had found at a local photo swap meet. At the time, I had chosen to print only views which included people, feeling they were more interesting than the others,

but upon recently taking another look at the reels, I decided to share these additional views as well.

I had been unsure where the reels were made, but upon my most recent viewing, I noticed a tell-tale clue. In the background of a nighttime exterior shot of a store, I can make out a portion of the neon sign of a southeast Portland movie theater that still exists today, so suddenly I can pinpoint the exact street and block where some of these shots were made! The reels seem to show more than one store, but at least now I know that there's a good chance that they were all local.

I enjoyed looking at some of the packaging on the shelves, but then realized how little of the merchandise was even *in* packages! While buying bare light bulbs might be riskier than getting them in today's cardboard packages, I think many other items could easily be sold today without excess packaging, just as they were 50 years ago. 📺



This column combines a love of stereo photography with a fondness for 1950s-era styling, design and decor by sharing amateur stereo slides shot in the "golden age" of the Stereo Realist—the late 1940s through the early 1960s. From clothing and hairstyles to home decor to modes of transportation, these frozen moments of time show what things were really like in the middle of the twentieth century.

If you've found a classic '50s-era image that you would like to share through this column, please send the actual slide or a high-resolution side-by-side scan as a jpeg, tiff or photoshop file to: Fifties Flavored Finds, 5610 SE 71st, Portland, OR 97206. You can also email the digital file to stwrld@teleport.com. If the subject, date, location, photographer or other details about your image are known, please include that information as well.

As space allows, we will select a couple of images to reproduce in each issue. This is not a contest—just a place to share and enjoy. Slides will be returned within 6 to 14 weeks, and while we'll treat your slide as carefully as our own, Stereo World and the NSA assume no responsibility for its safety.

STEREO WORLD

A Publication of
National Stereoscopic Association, Inc.



Volume 36, Number 2
September/October 2010

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Front Cover:

Keynote presenters Brian May and Elena Vidal enjoy the stereos on a Fujifilm W1 digital 3-D camera screen at the Awards banquet during the 2010 NSA convention, Huron/Sandusky, Ohio. Details of the event are related in "Stereo Gusto In Ohio at NSA 2010," Part 1 in this issue. (Stereo by Cassandra Kaufman)

Back Cover:

C.L. Pond poses precariously with his stereo camera on Yosemite's Glacier Point in "South Dome from Glacier Point." by M.M. Hazeltine. Several of Pond's own views are reproduced in a chronology of his life and work in "Charles Lyman Pond, Buffalo Photographer of Western Expeditions" by Paul Hickman.

The National Stereoscopic Association is a non-profit organization whose goals are: to promote research, collection and use of vintage and contemporary stereoviews, stereo cameras and equipment, and related materials; to promote the practice of stereo photography; to encourage the use of stereoscopy in the fields of visual arts and technology; to foster the appreciation of the stereograph as a visual historical record.

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EDITOR'S VIEW

Comments and Observations

John Dennis

Changes

If something seems different about this issue (the packaging may offer a hint) it's because *Stereo World* has moved to a new printer which specializes in small publications like ours, helping cut both printing and mailing expenses.

More easily noticed will be the fact that coverage of this year's NSA convention has been divided into a two-part feature starting in this issue. The complex schedule of the event, with so much happening on each of the seven days is one reason. The explosion of stereographic convention coverage thanks in large part to the Fujifilm W1 digital 3-D camera is the other. Nearly half of the attendees seemed to be shooting everything and everyone with their W1s, often sharing those images with several other W1 owners via the camera's IR transmission port, making it a challenge to know who shot what by the third or forth generation of camera-to-camera image sharing. Coverage of all the elements of this convention (and likely future conventions) needs two issues for both the page space and detail gathering these ever busier events deserve.

Jumping on the 2½-D Bandwagon

The NewViews column in this issue covers four new digital 3-D cameras. Even a year ago, that would be astounding in itself. But currently there are many more than that, newly on the consumer market or soon to enter it. Most are small camcorders designed to easily interface with 3-D TVs, and most have lenses spaced at far less than *half* of normal human eye separation. That could tend to mitigate the effects of mistakes many beginners will make, but outside the close-up range, these cameras hardly qualify as effectively "3-D."

Rumors of a Sony 3-D camera spread quickly a few months ago, turning to general shock when the product that hit the market turned

out to have just a single lens. The trick is that sequential digital stereo has been piggybacked onto a camera that takes panoramas if swept across a wide scene while it fires off multiple exposures. Sony Cyber-shot® Digital Cameras TX9, WX5 and the "a NEX" Digital cameras with interchangeable lenses all include a "sweep panorama 3D mode." For a panorama, on-board software stitches together frames captured as you sweep across the scene, or selects adjacent right/left images for 3-D. (Apparently it will be up to the speed of one's hand and the camera's software what the effective separation of the exposures will be.) Nowhere in the promotional web pages are potential customers advised that subjects must be almost completely static for this kind of 3-D photography



The Sony Cyber-shot® Digital TX9 digital camera for "sweep" panoramas automates sequential stereos for the mass market, assuming they have or are about to purchase a 3-D TV.

to work well. Sony has produced a 21st century, high tech digital version of the cameras often employed for sequential stereography in the 1840s and 1850s (think T.W. Williams and his *Village*) before the obvious solution of two lenses captured the market. See

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The Panasonic HDC-SDT750K wearing its 3D Conversion Lens. The new professional level Panasonic 3-D video cameras have more standard lens separations, but the interest here seems to be more the promotion of 3-D TVs than serious amateur stereoscopic video.

www.sonystyle.com/webapp/wcs/stores/servlet/ProductDisplay?catalogId=10551&storeId=10151&langId=-1&productId=8198552921666234657. Masuji Suto has provided instructions on how StereoPhoto Maker can split the Multi-Angle MPO files from these Sony cameras at www.stereomaker.net/sony/sony.htm.

Boldly entering the 2½-D world in another way are cameras like the Panasonic HDC-SDT750K, billed as the "World's First Consumer 3D Camcorder." In fact Toshiba beat them by about 22 years, not to mention the more recent digital 3DInlife camcorder (SW Vol. 34 No. 3, page 29). This \$1,399.95 camera uses a "3D Conversion Lens," a unit containing two small lenses positioned within the diameter of the camcorder's original single lens with a separation of what appears to be in the range of 20mm or maybe less. Major money for minimal 3-D impact, in any case. (Panasonic's fine print narrows that "First" claim to: "As a consumer camcorder with 3D conversion lens for the AVCHD standard.") See www2.panasonic.com/consumer-electronics/shop/Cameras-Camcorders/Camcorders/model.HDC-SDT750K.

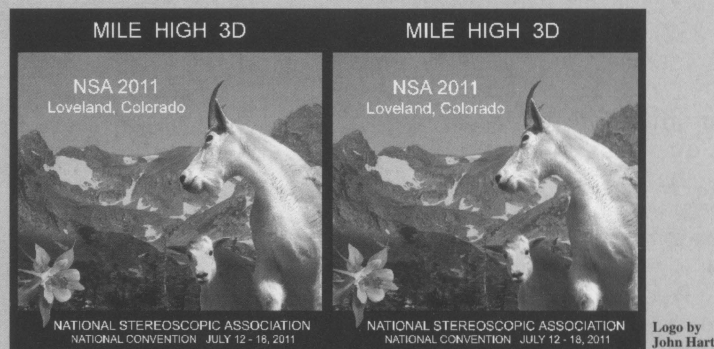
Panasonic is also set to introduce 3-D conversion lenses for their line of sub-DSLR "Lumix G" cameras with interchangeable lenses. Like

those for the pricer camcorder, these lenses will offer minimal separation and depth, but they do give Panasonic a way to provide consumers a way to create their own 3-D content for the firm's line of 3-D TVs. Tight close-ups of subjects like kids blowing out birthday candles could amaze family and

friends, and could help expand general interest in many aspects of 3-D.

Yet another camcorder, the "3D VIEW" at \$600 also has a stereo base in the 20mm or less range and can be found at www.hammacher.com/Product/78649?promo=Category-NewArrivals&catid=60. 

Take a 3-D Vacation to the Rocky Mountains!



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GONE MADDD



"I ONLY WATCH 3-D MOVIES. I DON'T LIKE PAYING FULL PRICE FOR A 2-D MOVIE KNOWING I GOT RIPPED OFF AN ENTIRE DIMENSION."



"I ONLY WATCH 3-D MOVIES. I DON'T LIKE PAYING FULL PRICE FOR A 2-D MOVIE KNOWING I GOT RIPPED OFF AN ENTIRE DIMENSION."

by AARON WARNER
3-D by Ray Zone

www.cartoonistsforhire.com
www.ray3dzone.com

Edwin Land's *Other* Camera

by John Dennis

When David Prakel of De Montfort University in the UK submitted his PhD proposal towards a Masters in Photographic History, he chose Polaroid's early history as his subject. As part of his research he discovered the photo seen here, with further research leading to three U.S. Patents related to the Vectar-1 camera (2505140, 2453075 and D149233). A colleague suggested he inquire with the NSA for more details about the camera's purpose and ultimate fate, but so far only more questions and conjecture have emerged.

The original concept of the Vectar-1 may have sprung from a desire to facilitate the introduction of the Polaroid Vectograph to the consumer marketplace following its intense but specialized use during World War II (SW Vol. 8 No. 5). The second paragraph of a 1948 Polaroid Company patent refers to anaglyphs, Vectographs and polarized projection of stereoscopic images in describing the need for a camera that will keep the subject being focused on in a consistent 3-D plane by aligning the two images via a connection to the



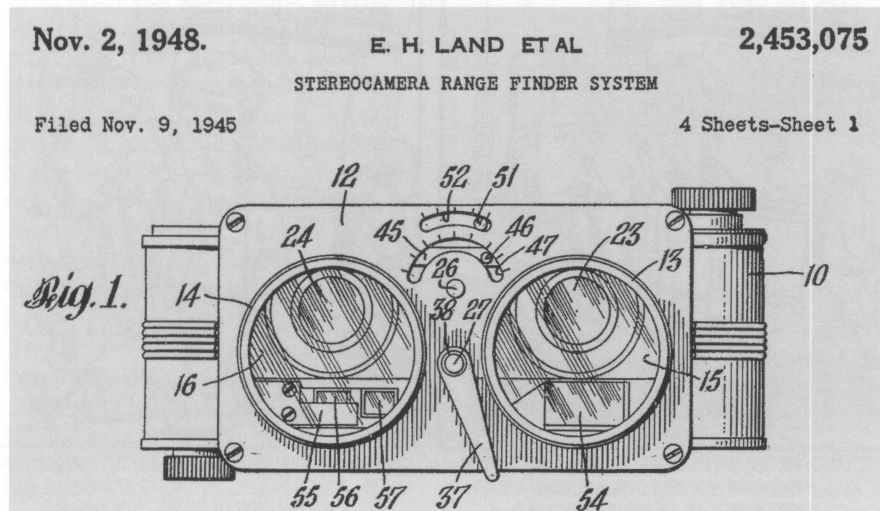
Possibly the only Polaroid Vectar-1 camera ever made, posing here for a promo shot.

range finder. This was to be accomplished with thin circular prisms in front of the lenses to shift the

images very slightly to the right or left with the movement of the range finder and the focusing of the lenses (at the same time correcting for viewfinder parallax), thus avoiding the mechanical complexity and image distortion of toeing in lenses to follow the point of focus.

Patent drawings show at least two potential camera designs, with the one by Walter Dorwin Teague clearly reflected in the camera held by the model in the photo. This is evidence that the project at least reached the stage of either a mock-up or an actual working prototype. At first glance it resembles a simple point-and-shoot camera using 120 or 620 film. Teague had designed several iconic, streamline art deco style cameras for Kodak including the Bantam Special, and this design for Polaroid followed that tradition.

The 35mm concept of the camera bears Land's name and a 1945 filing date that indicates an interest in the project almost as soon as the war had ended. Note that the circular prisms cover both the range finder windows and the lenses.



But U.S. patent 2453075 (also dated 1948 like the Teague design and assigned to Polaroid Corp.) goes into great detail covering a "STEREO CAMERA RANGE FINDER SYSTEM" involving the image alignment prisms mentioned above for a sophisticated 35mm camera that seems far from the slick product promoted in the photo. If ever produced, this version may have looked more like the early French Homeos than the Vectar-1.

Patent 2505140 pictures a fixed-focus camera closer to the Teague design, but describes a still fairly complex system of built-in auxiliary lenses for closer focusing which *also* realigned the images at the film planes to place the main subject at or near the stereo window and simultaneously adjusting for vertical viewfinder parallax! No specific film size is mentioned. It also featured adjustable f-stops and a level inside the viewfinder, making the camera in the photo (if it followed the patent) far more sophisticated than it looks.

Perhaps the biggest unknown here is Polaroid's marketing plan for the camera. Was it intended as simply a general-purpose stereo camera, or was it part of a strategy to spread Vectograph prints beyond the military and ophthalmologist's offices? Were there hopes to offer mail order processing and 3-D Vectograph prints to the quickly growing American families of the early 1950s? No viewers—either print or slide—would have been required. Inexpensive and easily mailed paper Polaroid glasses would have opened effortless 3-D photography to the masses with no mounting or viewing complications, and color Vectographs were already a lab reality, perhaps further along than the camera itself.

We may never know what happened to the idea. Costs for mass production of amateur Vectograph prints, no matter how automated, may have proved prohibitive. And through those same postwar years, Edwin Land's attention and finances just may have been occupied by a very different camera, the Polaroid Land instant print camera, introduced to the public in 1948—the same year on many of the Vectar-1 patents. 📷

April 6, 1948.

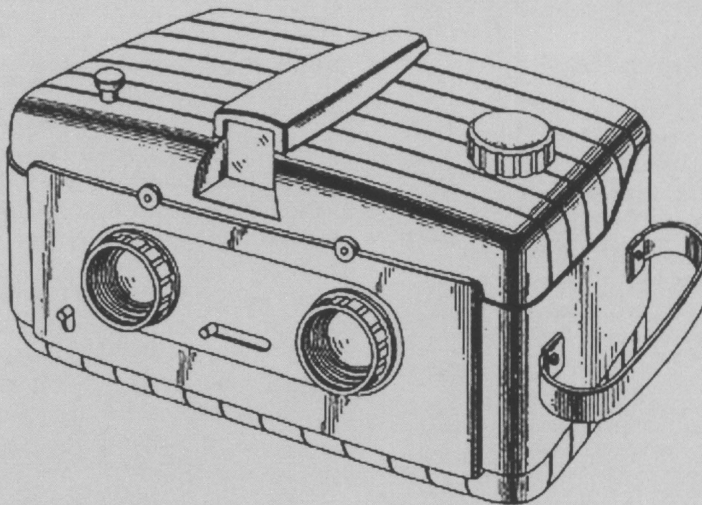
W. D. TEAGUE

Des. 149,233

CAMERA OR SIMILAR ARTICLE

Filed Jan. 16, 1947

2 Sheets-Sheet 1



The Vectar-1 styling revealed in a patent drawing by designer Walter Dorwin Teague.

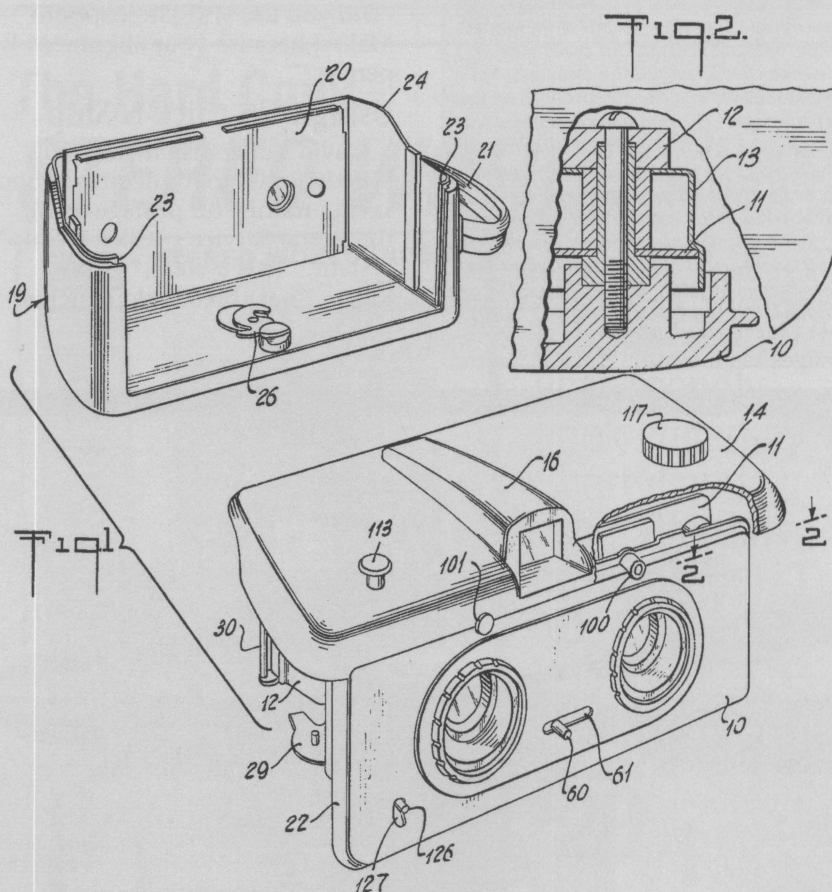
April 25, 1950

G. M. PELTZ ET AL
STEREOSCOPIC CAMERA

2,505,140

Filed March 5, 1947

5 Sheets-Sheet 1



The Teague design as detailed for Polaroid by G.M. Pelz shows the front and back sections. The film window in the back and the film spool holder (#29) in the lower front confirm that this was a roll-film camera.

THE SOCIETY

News from the
Stereoscopic Society of America

Ray Zone

Speedy Bravo

Speedy Bravo is a small but potent folio with David and Linda Thomson serving as folio circuit secretaries. Speedy, of course, means that a "5-day rule" applies—a goal which is often sought after but frequently not achieved. Nevertheless, the circuit continues with very fine work produced by Speedy Bravo members.

For some time now, Speedy Bravo folio has been graced with remarkable pinhole stereo photography by Thomas Moore (#799) of Barhamsville, Virginia. Thomas

The Stereoscopic Society of America is a group of currently active stereo photographers who circulate their work by means of postal folios. Both print and transparency formats are used, and several groups are operating folio circuits to meet the needs in each format. When a folio arrives, a member views and makes comments on each of the entries of the other participants. His or her own view, which has traveled the circuit and has been examined and commented upon by the other members, is removed and replaced with a new entry. The folio then continues its endless travels around the circuit. Many long distance friendships have formed among the participants in this manner over the years.

Stereo photographers who may be interested in Society membership should contact the Membership Secretary, Les Gehman, 3736 Rochdale Dr., Fort Collins, CO 80525, (970) 282-9899, les@gehman.org

produces his pinhole stereos with plastic Holga cameras using Ilford FP4 120 size negative with a rating of 125 ASA. He uses an Epson 2250 scanner and Epson Stylus 3800 printer to print on Epson Glossy paper for the final stereoview print card.

Moore's current view is a nostalgia, almost mournful, stereo image titled "Road Closed" that was very well received by Speedy Bravo folio members. "This view has a melancholy feel to it that is very appealing," wrote Thom Gillam. "Interesting effect," wrote Peter Jacobsohn. "It looks like an image from the early days of photography." "If the barrier wasn't modern," wrote David Thompson, "this would look like a 100-year old view." "Powerful image," wrote David Goings. "Very moody," wrote David Kuntz. "Did you use SPM [Stereophoto Maker] because your alignment is perfect?"

Using USPS Click-N-Ship

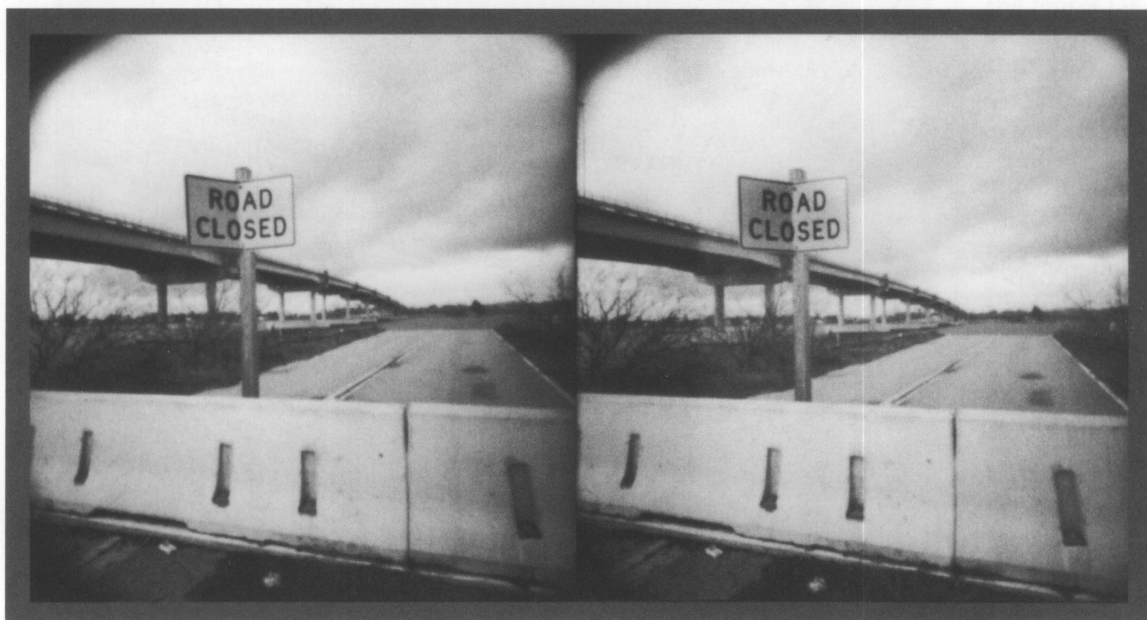
David Kuntz also instructed Speedy Bravo folio members about saving money on postage using the Postal Service's "Click-N-Ship" system. "This system," wrote Kuntz, "has three main benefits:

1. You can purchase and print postage for a package without getting out of your desk chair. All you need is a credit card and a way to weigh the package.
2. Normally you cannot post packages heavier than 13 ozs in your mailbox or a collection box, but if you use Click-N-Ship, this weight limitation is lifted. Any weight package that fits in your mailbox or a collection box can be sent. You can verify this at www.usps.com/send/prepare-mailandpackages/preparing-packages.htm
3. There's even a very small discount over normal pricing when you use Click-N-Ship.

"I always use this system for my folios," notes Kuntz. "I just print the postage on my printer and then put the package in my mailbox. I've never had any problems with it."

14th SSA International Stereo Card Exhibition

Judging for the SSA International Stereo Card Exhibition was held at the NSA Convention, Huron, Ohio, July 2010. Exhibition Chairs were Dennis Green and David Goings. Exhibition judges were



Pinhole stereo "Road Closed" by Thomas Moore.

*Classic Chevy Chrome**Classic Chevy Chrome*

Ron Fross, Al Sieg and John Waldsmith.

Award Winners And Acceptances

THE PSA GOLD MEDAL for Best of Show went to David Kuntz for "Classic Chevy Chrome."

THE FRANK LLOYD AWARD for Best Architecture went to Boris Starosta for "Ruffin (FAL Roof E3-M)."

BEST SCENIC (Sponsored by Eileen & Ray Bohman) went to Peter Jacobsohn for "Annandale Falls, Grenada."

BEST HUMOR went to David Kuntz for "Child's Play."

THE INFINITY AWARD for Best Hyper went to Bruno Braun, EPSA for "Windmuehle."

THE MUSCOGEE 3-D AWARD for Best Photojournalism went to David Kuntz for "USS Arizona Memorial."

THE YELLOWFOOT AWARD for Best SSA Member went to Dennis Green for "Keystone Card."

BEST PRESENTATION (front and back) went to David Goings for "Haunted House."

THE KEYSTONE AWARD for Best Portrait went to Ringo Schneider for "Municipal Park."

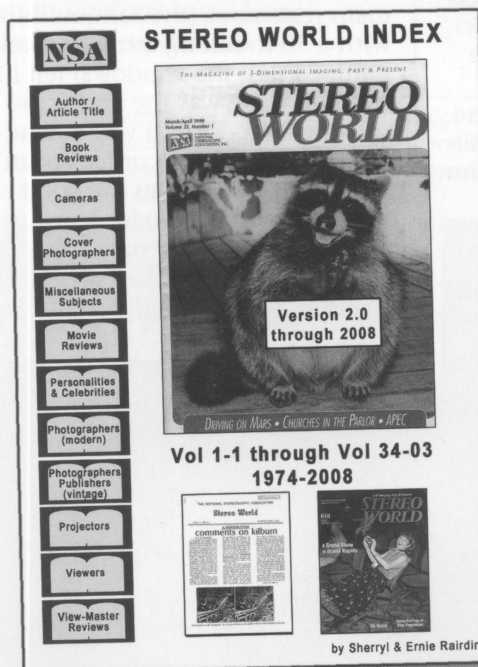
How to Contact the SSA General Secretary

Ray Zone is the General Secretary of the Stereoscopic Society and in that position is responsible for production of this column in *Stereo World* magazine and, according to the Membership Rules of the Society, is also "responsible for trying to keep the Society func-

tioning effectively and harmoniously." Folio secretaries and any member of the NSA interested in

the SSA is encouraged to contact Ray via email at: r3dzone@earthlink.net. 📧

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Stereo Gusto in Ohio at NSA 2010

Part 1 *by John Dennis*

The first ever NSA convention held at a resort was an impressive success, with 384 stereo imaging enthusiasts in attendance for all or part of the seven day event. This 36th NSA convention and Trade Fair was back in Ohio where the first few of these events were held in the 1970s, about 75 miles down the road in Canton. With the conference center just down a hall from the lodge part of the complex, it might have been possible to obsess on stereography enough to overlook the wilderness themes of Sawmill Creek Resort, just west of Huron, Ohio on lake Erie, except for the wildlife and Native American based motifs and names of every building and facility there. You could wake up in the Chippewa, Shawnee or one of three other tribal name wings of the hotel, grab coffee and a bagel in the Trapper's Outpost Deli, and stroll to Wilderness Hall to check

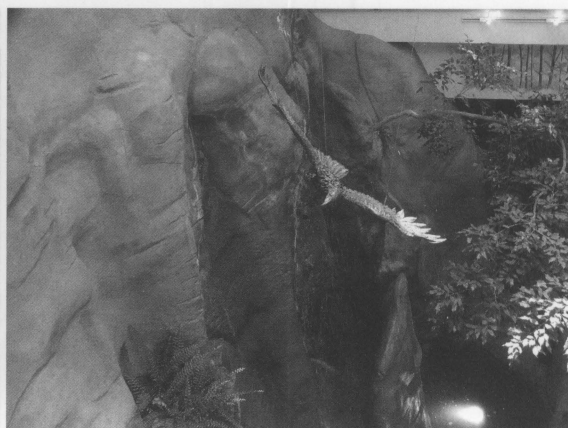
out the Trade Fair or the Stereo Theater. Or, you could duck into the Hiawatha Room for a workshop, the Birds of Prey Room for the Art Gallery, or later into the Black Bear Saloon.

There had been some concerns about people feeling trapped at an isolated resort with no alternative food or shops in practical walking distance, but there was in fact so much going on that leaving the facility in search of some local cafe or fast food joint was never a big temptation. When eating at the main restaurant (the Salmon Run, with a 50 foot long artificial creek pumped past the windows) felt like overkill, there was the quite reasonable Outpost Deli where sandwiches, soup, drinks or ice cream were available next to the guest room wings of the lodge.

The weather most days was hotter and moister than usual, but the only outdoor walking really

required within the resort involved getting across the parking lot if you wished to visit the two-story gift shop in an 1887 barn, or reaching the pub at the golf course clubhouse for the Stereoscopic Society Dinner. Weather later in the week cooperated in dramatic fashion for the Sunday evening cruise, with a combination of clear skies and a brief exciting rain squall with thunder and lightning. Weather for the all day Monday excursion included some welcome clouds by the time the eager but warm stereographers were roaming the streets of Put-in-Bay on Lake Erie's South Bass Island.

With so many things going on every day, scheduling of events at this convention was a minor masterpiece of planning on the part of co-chairs John Bueche and Barb Gauche. The complexity started as early as Tuesday, when an excursion to the Carousel Museum in



.....
The two-story indoor Tecumseh Falls provided an interesting 3-D opportunity (if not quite a "wilderness" experience) between the Art Gallery in the Birds of Prey Room and the workshops in the Hiawatha room.
(Stereos by the author except as noted.)
.....



Sandusky provided a great photo opportunity (and dinner) for those who had already arrived. That was followed the next day with a trip to the Mon Ami Winery for wine tasting and dinner. In all, there were excursions and/or photo walks on five of the convention's seven days! Overlap of major events was minimal, except for a couple hours of Trade Fair/Stereo Theater overlap on Saturday and Sunday. Unless you've helped run one of these circuses of deep sensory overload, it's hard to describe the complexity involved in scheduling events, equipment and people with their sometimes conflicting interests and requirements.

A Lost Village Attends

In a sense, a once "lost" village in England was among the guests at the convention, along with the two dedicated authors of the book in which it has been found and reintroduced to the world in exquisitely reproduced stereoviews. Copies of *A Village Lost and Found* by Dr. Brian May and Elena Vidal were available at the registration desk in the Conference Center, where at a counter across the lobby the authors signed copies of the book (now in its fourth printing) during two busy signing sessions. T.R. Williams, the stereographer who took those 1850s views documenting a soon to vanish pre-industrial village life in his series "Scenes in "Our Village" was pre-

sent as well, via both the book and the projection of his views in the Stereo Theater during the Keynote presentation by the authors. (See *SW* Vol. 30 No. 1, Vol. 31 No. 4, Vol. 33 No. 5 page 4.)

Workshops

Nineteen workshops were scattered over four days of the convention, with some of the favorites repeated on Sunday. Many of these, as well as past workshops, will be available on DVDs from Dennis Green at <http://home.comcast.net/~workshops>.

GETTING STARTED IN STEREO

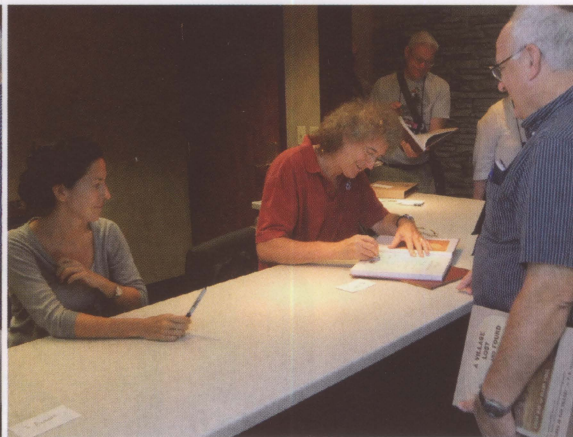
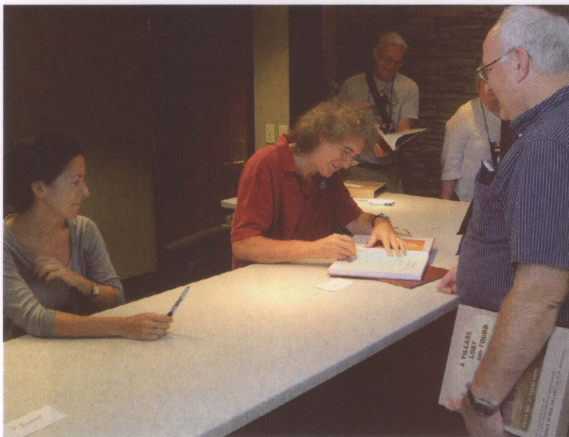
PHOTOGRAPHY by Tom Rywick presented an overview to beginners including a brief history, relative difficulty, costs, systems, viewing methods, projection etc. as well as cameras from Realists to the W1 and SDM controlled digital Canons.

FROM FILM TO DIGITAL by George Themelis was for experienced film users just getting into digital stereography.

STEREO WINDOW BASICS by Bill Moll illustrated the theoretical concept of the stereo window using actual physical window frames. Covered were its

The Wilderness Courtyard between the lodge buildings and the Conference Center offered a bit of outdoor escape from the rush of activities without a long walk through parking lots or the golf course. Bears are among the resort's main icons, from signs to stuffed souvenirs to this mother watching cubs up in a tree.

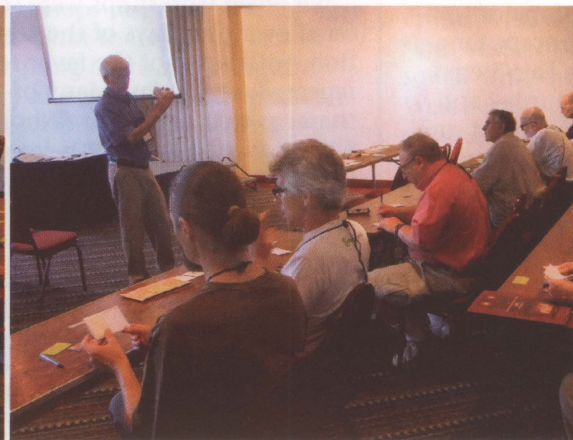




.....
 Elena Vidal and Brian May sign copies of *A Village Lost and Found* during the first signing session in the Conference Center lobby. The book was available just across the lobby at the Registration desk (where 120 copies were sold), and the signing line extended down the hall around the corner.



.....
 Literally grasping the concept of the stereo window, attendees enjoy Bill Moll's "Stereo Window Basics" workshop. (Stereo by George Themelis)



.....
 While most workshops covered some technical aspect of digital stereo imaging, Jim Olsen's "3D Doodle-Making with Carbon Paper" kept these new 3-D artists occupied with paper, pencils, and carbon paper.

application to various 3-D formats and cropping to eliminate violations.

JUDGING STEREO IMAGES by George Themelis, Boris Starosta and Al Seig discussed issues related to judging, qualifications for judges and mechanics of judging.

A BEGINNERS' GUIDE TO STEREO-PHOTO MAKER by David Starkman was an overview for beginners on how to use the powerful and free program for manipulating stereo images.

POLARIZATION OF LIGHT IN STEREO PHOTOGRAPHY by George Themelis covered differences between linear and circular polarization, and some experiments you can do with RealD glasses from theaters.

DIGITAL STEREO PROJECTION FOR BEGINNERS by Steve and Suzanne Hughes provided tips on getting started in digital stereo projection.

STARTING WITH STEREO DATA MAKER by Steve and Suzanne Hughes featured a brief overview of how Stereo-Data Maker works, looking at examples of cameras combined and synchronized with it.

2D TO 3D CONVERSIONS IN 2 MINUTES by Gene and Liz Mitofsky detailed the combination of Photoshop, GIMP or Photoshop Elements with StereoPhoto Maker to do conversions.

REVIEW OF THE FUJI 3D CAMERA by George Themelis gave a basic description of the Fujifilm W1 camera and

its advantages and disadvantages, giving tips for taking stereos like those shown in 3-D projection.

SINGLE CAMERA HYPER & HYPO-STEREOS by George Themelis covered taking hyperstereos and hypostereos with a single camera, with emphasis on digital cameras and especially the W1.

ELECTRONIC FLASH IN STEREO by George Themelis explained the special challenges of using flash with vintage stereo cameras, twin rig digital cameras and the W1.

HOME BREW 3-D LENTICULAR by Michael Brown gave an overview of the tools and techniques used from start to finish to make lenticular

prints with a personal computer and inkjet printer.

HIGH DYNAMIC RANGE IMAGING IN STEREO by David Kesner revealed how to extend the range of an image beyond what can be captured in a single exposure, preserving detail in both the brightest highlights and deepest shadows and overcoming problems associated with this effort in stereo.

MEDIUM FORMAT STEREO PHOTOGRAPHY by David Lee covered the advantages and disadvantages of Medium Format, various camera pairs, MF cameras etc.

SHOOTING AND PROCESSING PHANTOGRAMS by Barry Rothstein demonstrated shooting stereos for phantograms outside, rather in a tabletop situation, including pairs taken under ideal conditions with grid references and with the use of "point and shoot" shots. Photoshop processing of both types of stereos into phantograms was then covered.

3-D DOODLE-MAKING WITH CARBON PAPER by Jim Olsen was a hands-on experience in making 3-D doodles with a simple paper slider and carbon paper. Stereo drawings from 2 to 9 planes were produced by people who had never tried drawing in depth

before, in one of the workshops repeated on Sunday by popular demand.

COLLECTING VINTAGE STEREO SLIDES by Ron Labbe & Tom Martin gave tips on how to buy, label, classify, preserve and share vintage stereo slides.

CUSTOM VIEW-MASTER REELS by Sheldon Aronowitz explained how to make custom View-Master reels from cameras to alignment, single reels vs packets, art for packets, distribution etc.

Trade Fair

A packed room greeted customers of the Trade Fair for much of Saturday, with 41 different dealers selling everything from views to cameras, viewers, accessories books and images in nearly every 3-D format known. One of the books, *The Civil War – A History in 3-D* is reviewed in this issue. Lighting was unusually good, with no noticeably dark corners, and examining images was as easy as at any Trade Fair yet seen.

The NSA table was expanded to eight tables this year, with six tables across the aisle along a wall

stacked full of *Stereo World* reprints and original back issues hauled from storage sites to the convention by Bill Moll. With the retirement of Back Issue manager Don Gibbs last year, and back issues now available on the *Stereo World* DVD (SW Vol. 36 No. 1 page 3), these copies were offered at bargain prices to help cut storage costs and make issues available for collectors and/or promotion of the NSA. Business was quite brisk, keeping table volunteers Sylvia Dennis and Sherryl Rairdin busy with sale items as well as current issues, renewals and new memberships. A selection of back issues will again be on sale at the 2011 NSA convention in Colorado.

Awards Banquet

Gathered in the Iroquois Nation Room of the Conference Center, 217 people watched NSA President Lawrence Kaufman announce the 2010 NSA Award winners at the annual Awards Banquet. The Saturday evening ceremonies opened with the surprise presentation of a birthday cake adorned with a large guitar to keynote speaker Brian

Jeffrey Kraus sorts views for customers at his Trade Fair table. About a third of the busy room is visible here.



The OWL folding stereoscope, designed by Brian May for A Village Lost and Found, holds vintage stereoviews as well, and was available separately at the Trade Fair table of the London Stereoscopic Company. Here some friends help promote the unique folding/focusing viewer. Left to right are David Burder, Lily Dinkins, Andrew Hurst of the LSC and David Starkman. Behind Lily and Andrew you can just see Elena and Brian checking out Barry Rothstein's phantograms. (Photographer unidentified)

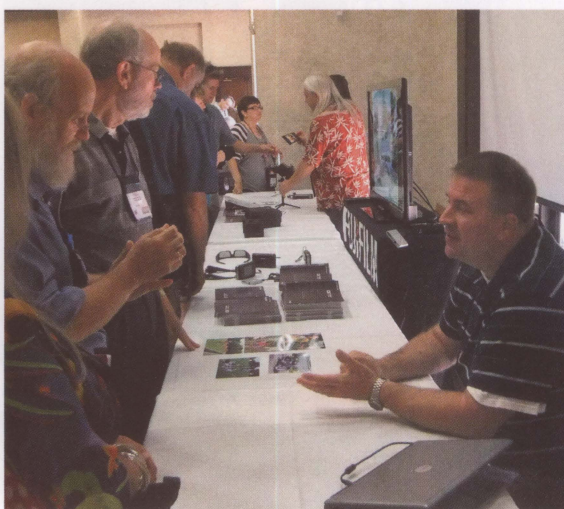
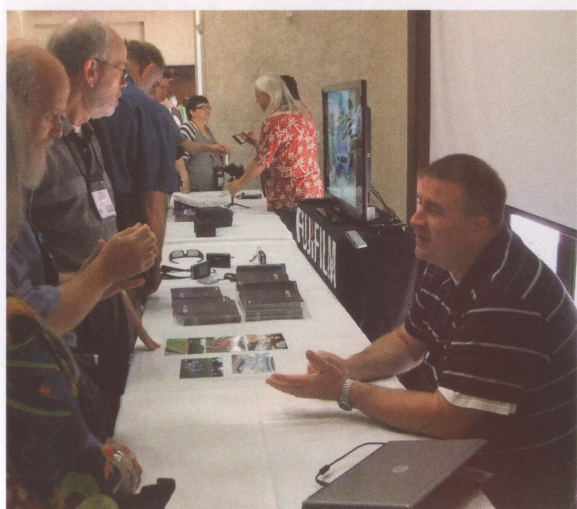




.....
 Young OWL fan Louisa Richardson clutches her stuffed toy as she checks out a sample view at the London Stereoscopic Company table while her father Julian positions the viewer.



.....
 Perhaps anticipating some similar 3-D enhancement, Louisa then carefully placed her stuffed toy in the OWL.



.....
 Fujifilm USA Representative Jim Calverley talks digital stereography with potential W1 customers while others watch W1 images on a large 3-D TV screen at the Fujifilm Trade Fair table.

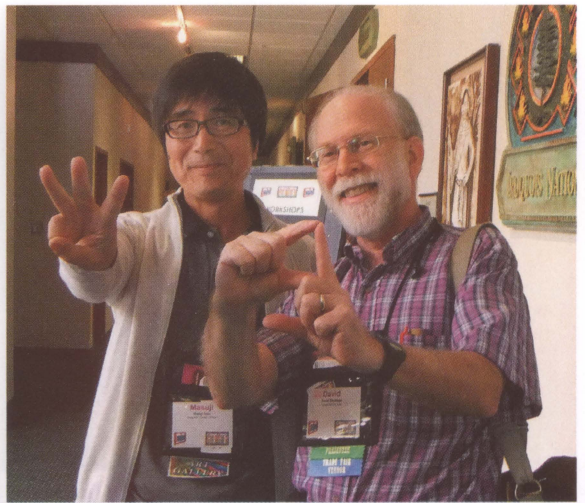
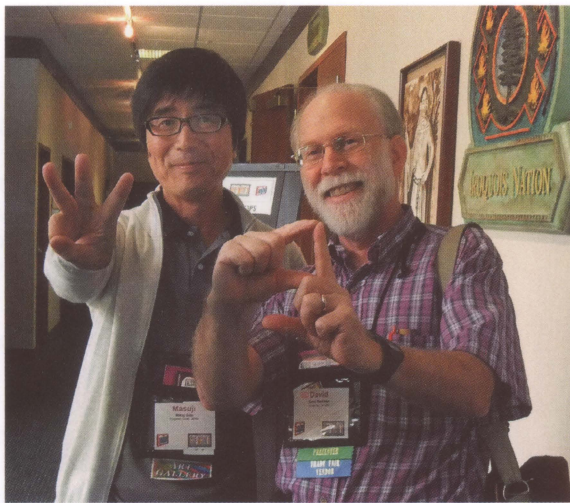
May, whose birthday was coming up that Monday. Members armed with stereo cameras of every description (but overwhelmingly Fuji W1s) quickly gathered around him as he held his cake for all to see—a minor riot of determined but quite benign paparazzi recording in depth what appeared to be a genuinely moving moment for a veteran of celebrity status treatment. As people slowly returned to

their tables, images on W1 screens were quickly compared and shared between cameras via the IR transmission capabilities only recently revealed to most owners. Minutes later, it was announced that Saturday was the birthday of *Stereo World* contributor and workshop presenter George Themelis, who was quickly given a piece of cake by Brian May.

NSA Awards

THE WILLIAM C. DARRAH AWARD for Distinguished Scholarship and Extraordinary Knowledge of Stereoscopy went to Brian May and Elena Vidal. Rather than being the first award of the evening, this one was held until the audience had reassembled in the Stereo Theater auditorium for the Keynote address accompanied by stereo projection of images from the book that prompted the award—

.....
 Creator of StereoPhoto
 Maker and Special
 Award winner Masuji
 Suto traveled to the
 convention from Japan
 and here tries a "3-D"
 mime with David
 Starkman in the hall
 outside the workshop
 room. Might the next
 version of StereoPhoto
 Maker include a
 tool for reversing
 backwards Ds?



.....
 Brian May with the
 surprise guitar-
 decorated birthday
 cake presented to him
 at the Awards Banquet.
 Stereo Cameras, with
 Fuji W1s in a clear
 majority, quickly
 surrounded him on
 three sides.



.....
 Deep digital delight—
 keynote presenters
 Brian May and Elena
 Vidal check out the
 stereos on a W1 screen
 during the annual NSA
 Awards banquet where
 similar scenes could be
 found at every table in
 the room. (Stereo by
 Cassandra Kaufman)



A Village Lost and Found. (SW Vol. 35
 No. 2 page 33.)

THE ROBERT M. WALDSMITH AWARD
 for Meritorious Service and Extraordi-
 nary Contribution of Time and Effort
 to the NSA was awarded to Robert D.
 Shotsberger.

Special Awards

LIFETIME MEMEBRSHIP was awarded
 to former NSA President Gordon
 Hoffman.

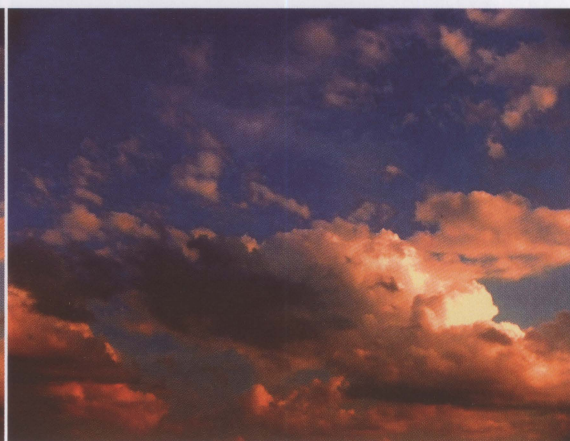
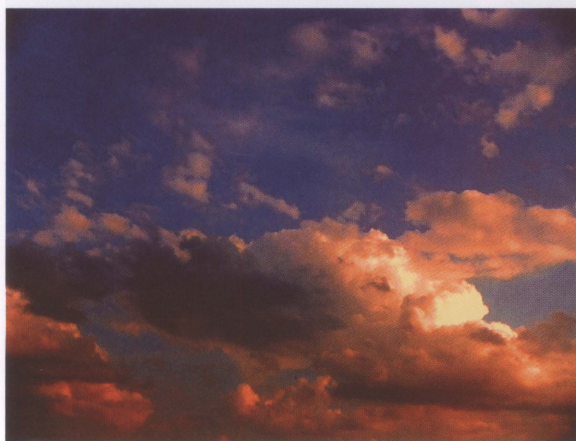
A **SPECIAL AWARD** went to Masuji Suto
 for his dedicated work and continu-
 ing improvements to his fantastic
 and free software StereoPhoto Maker,
 used by the majority of the delighted

audience cheering his presence and
 recognition.

A **SPECIAL AWARD** went to David Sykes
 for his work with the stereo additions
 to the Canon hack software Stereo-
 Data Maker and his work with
 English translations for StereoPhoto
 Maker.



.....
"Vermillion Lighthouse Sunset" by Mary Paul won First Place in Shooting Sandusky, the on-Site Image Competition.



.....
"Clouds Over Sandusky" by George Themelis won First Place in the Fujifilm sponsored On-Site Competition for stereos taken with the W1 digital 3-D camera. It was taken using the W1's Advance 3D Mode to take hyper/hypo stereos, the subject of a Stereo World article and a workshop by the winner.

Stereo World Awards

THE LOU SMAUS AWARD for Best *Stereo World* Article on Modern Stereoscopy went to George Themelis for "Hyper/Hypo fun with the W1" in Vol. 35 No. 6.

THE NSA AWARD for Best *Stereo World* article on Historical Stereoscopy went to Paula Richardson Fleming for "The Iridescent World of Bi-colored Stereos" in Vol. 35 No. 1.

Stereo Theater Awards

THE PAUL WING AWARD for Best Show and 1st Place went to John Hart of Colorado for "Homewrecker."

SECOND PLACE went to Jay McCreery for "Animated 3-D Stills."

THIRD PLACE went to Gert-Jan Wolkers for "Maihaugen."

HONORABLE MENTION went to Greg Dinkins for "Bonnaroo Talent Announcement."

Exhibits – Vintage

THE TEX TREADWELL AWARD and 1st Place went to Russell Norton for "Gone Fishing."

SECOND PLACE went to Mary Ann and Wolfgang Sell for "Dream House of the 30's."

THIRD PLACE went to Joe Cavalier for "Organ Grinders: Traveling Music Makers of Mirth & Myth."

HONORABLE MENTION went to David Wood for "London Stereoscopic Company American Views."

Exhibits – Modern

FIRST PLACE went to Steve and Suzanne Hughes for "Faces of the Galapagos."

SECOND PLACE went to Steve Drinkut for "Civil War Reenactment."

THIRD PLACE went to Doug McGovern for "Bloody Dawn."

HONORABLE MENTIONS went to Harold Jacobsohn for "Victorian Charm" and to Gabriel Golden for "Imaginary Sunsets."

Exhibits – Other

FIRST PLACE went to Betty Drinkut for an anaglyph print titled "Looking at the World Upside Down."

SECOND PLACE went to Steve Drinkut for an anaglyph print titled "The Walnut Tree."

THIRD PLACE went to Eugene Mitofsky for a tabletop phantogram titled "Just Out of Reach."

HONORABLE MENTION went to Barry Rothstein for a phantogram titled "Cocker"

A **SPECIAL AWARD** went to Wojtek Rychlik for a book, titled "Lakes of the Sangres in 3D," an atlas with over 200 original aerial anaglyphs of the Sangres de Cristo mountains of Colorado. (SW Vol. 35 No. 6 page 33.)

THE ARTISTS' CHOICE AWARD (voted on by the Art Exhibit artists) went to Theo Prins for his stereoscopic digital paintings. (SW Vol. 36 No. 1 page 33.)

Shooting Sandusky – On-site Stereo Competition

As no nearby film processing labs were available, this year's competition was all digital, a situation which may become increasingly common.

FIRST PLACE went to Mary Paul for "Vermillion Lighthouse Sunset."

SECOND PLACE went to William Costa for "I've Been Working on the Railroad."

THIRD PLACE went to David Kesner for "Wine Cellar."

HONORABLE MENTIONS went to Harold Jacobsohn for "Artist," Susan Balmer for "Frog," Linda Nygren for

"Hibiscus at Sheldon Marsh" and Alexander Klein for "Knot."

Fuji Contest

A separate on-site contest for images taken using the Fujifilm W1 camera was sponsored by Fujifilm, with winners announced at the Banquet by Fujifilm USA Representative Jim Calverley.

FIRST PLACE went to George Themelis for "Clouds Over Sandusky."

SECOND PLACE went to Linda Nygren for "Hibiscus."

THIRD PLACE went to John Bueche for "Modeling."

HONORABLE MENTIONS went to David Tank for "3 Views of Sandusky Cemetery," George Kunze for "Light and Leaves" and George Themelis for "Going Home."

By a random count at each Banquet table and a number chosen by Elena Vidal, one lucky member at each table got to take home the OWL stereoscope and view reproduction center piece.

Mr. Calverley followed this by announcing the winner of the Raffle for a W1 camera. After a ticket belonging to Jim Langan was pulled from the bowl by John Waldsmith, the Fuji representative delighted the room with the news that he'd brought a *second* W1, which was won by Emily Dean.

Keynote

Following the the last of the awards, the audience reassembled downstairs in the Stereo Theater for the Keynote presentation by Brian May and Elena Vidal. As soon as people were seated, Lawrence Kaufman announced the two as winners of the *The William C. Darrah Award*, thanks to their

dedicated research leading to *A Village Lost and Found* as well as the *Stereo World* articles preceding the monumental book.

First *Stereo World* editor John Waldsmith continued with the introduction, recounting the story of how, many years ago, stereoview collector Brian May had joined the NSA at the height of his fame as a founding member of Queen under a pseudonym. For some time, only a few NSA members were aware that the guitarist and writer behind so many of Queen's gigantic hits could unwind with a copy of *Stereo World* and a stack of views between world tours and recording sessions. During his 30 years as a world-renowned rock musician he had little time to actively pursue his passions for stereoviews and astrophysics, although he did once manage to mix relatively unnoticed with other collectors at the Trade Fair of the 1983 NSA convention in Washington D.C. He has since earned his PhD in astrophysics, co-authored his first book, *Bang! The Complete History of the Universe*, and researched the life and stereography of Thomas Richard Williams as well as renewing the London Stereoscopic Company on line at www.LondonStereo.com. (SW Vol. 33 No. 5 page 4.) He holds the titles *Commander of the Order of the British Empire* and *Fellow of the Royal Astronomical Society*.

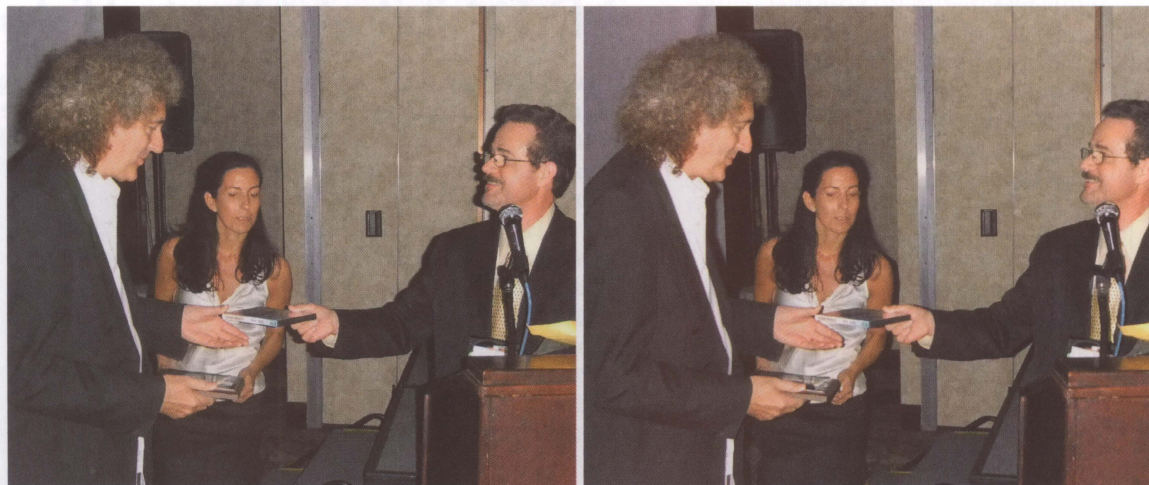
Village co-author Elena Vidal, who stood on the other side of the screen for her part of the presentation, has worked as a conservator of paintings in Italy, Spain and the UK, with an MA in Photographic

Conservation. Specializing in the history of stereoscopic photography, she has collaborated with May in conserving his stereoscopic collection and researching T.R. Williams's work in conjunction with several articles and *A Village Lost and Found*.

When Dr. May stepped to the podium he first announced "There's something I have to do" and quickly shot a picture of the audience with his Fuji W1, capturing the first several rows of delighted members in the stereo seen here. After thanking a long list of NSA members for their help with his research and his reception at the convention he began by describing the long background of his interest in T.R. Williams and the "Scenes in Our Village" series of stereoviews.

He mentioned that *A Village Lost and Found* was officially launched a few months ago in Hinton Waldrist—the village where it all began about 150 years ago—representing the fulfillment of a dream, "which I've had for probably 40 years to bring this work...to a new audience in the 21st century." A view from the TRW series discovered by accident about 40 years ago kicked off the projection part of the presentation while he revealed how "It triggered a great passion to discover what these cards were about, because nobody could tell me at the time. Nobody could tell me where they were taken, what message they were carrying. I set out to track them down, and many of you here have helped me track them down and I thank you very much—it's been a

.....
Brian May and Elena Vidal received The Darrah Award for Distinguished Scholarship and Extraordinary Knowledge of Stereoscopy just before their keynote presentation in the Stereo Theater. NSA President Lawrence Kaufman here adds a copy of the new Stereo World DVD.
(Stereo by Alexander Klein)
.....





As far as we know, this is the first time the keynote speaker at an NSA convention opened by shooting a stereo of the audience.



The NSA audience as seen from the podium.
(W1 stereo by Brian May)

long, long journey to find these 59 cards."

For those who might not have read the book or his *Stereo World* articles, Dr. May revealed that the Village was "lost" for so many years because a county line had been moved, leading historians to search in the wrong places. After relating some details of Williams' photographic career, the two co-authors went on to take turns describing views from the book as they appeared in 3-D on the screen. Elena Vidal described the subject and villagers seen, as well as any special techniques involved and the 2010 status of particular structures in the view. Brian May followed by reading the verse from the back of that view, probably channeling TRW as well as anyone living today could accomplish.

With the NSA convention the first stop, a bicoastal U.S. book tour took the authors to Philadelphia, New York City (two appearances, one bookstore and the Metropolitan Museum of Art) and to Los Angeles at the Independent

Theater and Griffith Observatory. NSA members Greg Dinkins and David Starkman helped with projection details for the east and west coast portions of the tour. Each city visit included print and/or radio interviews including an appearance on NPR's *Fresh Air*.

A *Village Lost and Found* can be found at or ordered from major

bookstores, or www.LondonStereo.com.

Note:

The Stereo Theater, Excursions, Art Gallery and other convention events will be covered in our next issue in order to provide the space they deserve. ☐☐

3-D Exhibit at Atlanta History Center

A new 3-D show designed by the Center for Civil War Photography (CCWP) will run to October 1, 2011 at the Atlanta History Center. Part of the Center's exhibit titled "War in Our Backyards: Discovering Atlanta, 1861-1865," the 12 minute show contains 17 vintage stereoviews (most by George N. Barnard) along with five modern stereoviews. Narrative captions and an original score are combined with the "pan and zoom" tech-

nique which helps immerse the audience in the views.

"The contrast between 1864 Atlanta and the modern urban Atlanta is striking, which is part of the message of the new exhibit. It really makes the point that looking around at modern Atlanta you would never imagine the history that's under your feet," said the show's designer, John Richter. For more information on visiting the exhibit see www.atlantahistorycenter.com. ☐☐

FRAMING THE WEST

THE SURVEY PHOTOGRAPHS OF TIMOTHY H. O'SULLIVAN

O'Sullivan's Survey Views Examined (and Rethinking "Gaps" in the Series)

Review and Observations by Dan Sherman

For anyone interested in the Survey photography of Timothy H. O'Sullivan, *Framing the West - The Survey Photographs of Timothy H. O'Sullivan* by Toby Jurovics, et al is a clearly written, well-researched book. The first in-depth publication on O'Sullivan in nearly 30 years, this is an excellent complementary companion to earlier publications like James Horan's (1966) *Timothy O'Sullivan: America's Forgotten Photographer*, Joel Snyder (1981) *American Frontiers - the Photographs of Timothy H. O'Sullivan, 1867-1874* and Rick Dingus (1982) *The Photographic Artifacts of Timothy O'Sullivan*. For those looking specifically for material on O'Sullivan's Survey stereoviews—this is the source.

The book contains three essays.

- 1) *Framing the West: The Survey photographs of Timothy H. O'Sullivan*

Framing the West - The Survey Photographs of Timothy H. O'Sullivan

by Toby Jurovics, Carol M. Johnson, Glenn Willumson, and William F. Stapp, Yale University Press in cooperation with the Library of Congress and the Smithsonian American Art Museum, 2010. 255 pp.: ill. (158 black and white) 9 3/4 x 11 1/2 in. 978-0-300-15891-5.

\$60.00 hardcover from

<http://americanart.si.edu/visit/stores/online/books/?ID=372>.

van by Toby Jurovics.

- 2) *Through Magic Lenses: Timothy H. O'Sullivan's Stereographs from the King and Wheeler Surveys* by Carol M. Johnson.
- 3) "Photographing under Difficulties": *Andrew Russell's Photographs for the King Survey* by Glenn Willumson, as well as an excellent, very thorough, well documented chronology of O'Sullivan by William F. Stapp.

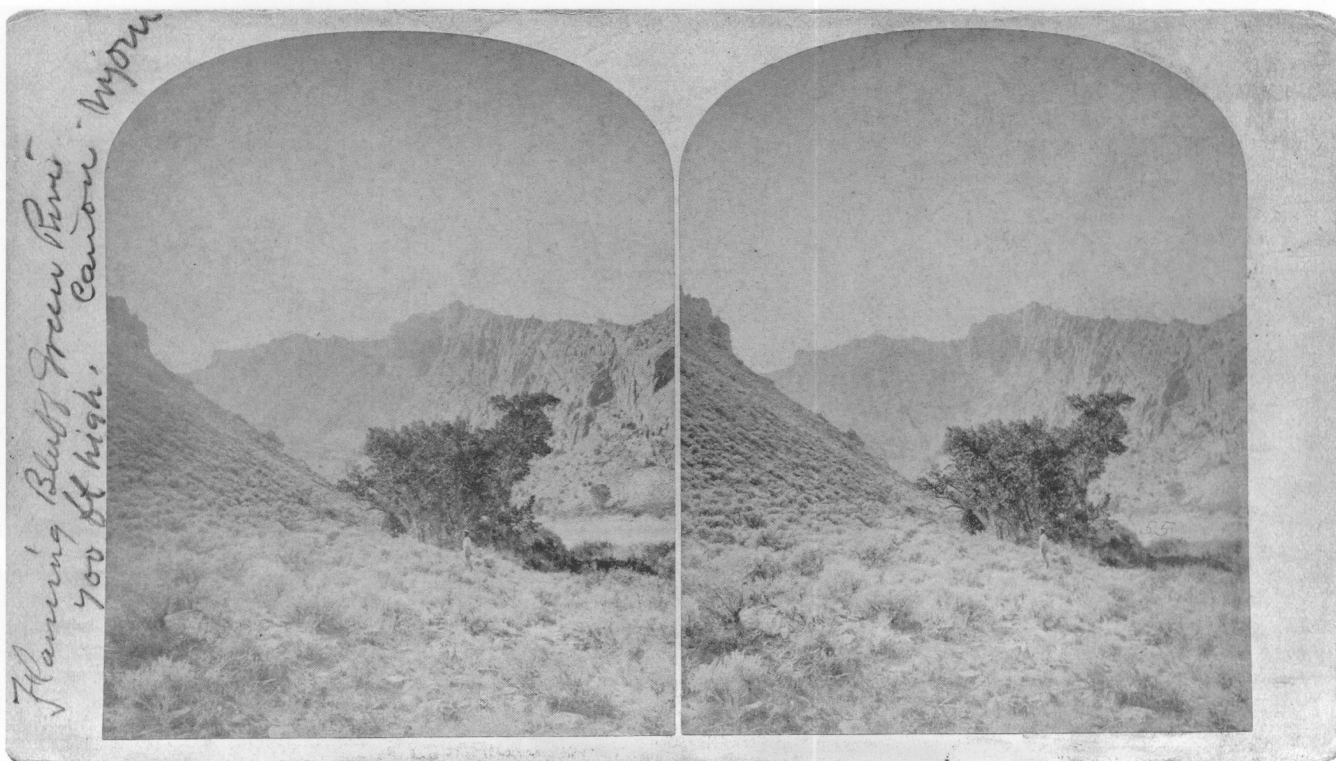
It also contains a section of 98 of O'Sullivan's full plate photographs from both the King and Wheeler surveys. Many other illustrations and reproductions of O'Sullivan's work are portrayed throughout the book. Carol Johnson has reproduced 13 of his stereoviews, most reproduced full size, from both the King and Wheeler surveys.

Jurovics' essay is a well-researched scholarly portrayal of O'Sullivan. He touches on O'Sullivan's early Civil War work, discusses various aspects of King's "Survey of the Fortieth Parallel" and the survey's relation to some of its predecessors—by Fremont, Bonneville and others. For those not familiar with the wet-plate photo process used by O'Sullivan, he presents a brief outline. His main focus, however, is on O'Sullivan's photography and how he uses his camera; how O'Sullivan's specific place-

ment of the camera to include or exclude certain features or to alter the line of the horizon manipulates the message being presented by the photograph. Also, how O'Sullivan excelled in photographing emptiness—the open vastness of The Great Basin and how his methods and style differed from some of his contemporaries—W. H. Jackson, C. E. Watkins, A. J. Russell, etc.

In Glenn Willumson's essay on the photographs taken on the King survey by A. J. Russell, my first reaction was why inset Russell into a book subtitled "The Survey Photographs of Timothy H. O'Sullivan"? After reading it I believe it is an essential element of this book. Russell, the official photographer for the Union Pacific Railroad joined the King Survey in late July 1869 and was with the survey for about three weeks. Many of the photographs that are part of the King survey in the Unita Mountains of Utah, that for many years were attributed to O'Sullivan, research now indicates were in fact produced by A. J. Russell.

The book's second essay *Through Magic Lenses: Timothy H. O'Sullivan's Stereographs from the King and Wheeler Surveys* is the primary focus of this review. While a few excellent assessments of O'Sullivan's photographic work on the Western Surveys have been pro-



Flaming Bluff Green River
700 ft high. Canon - WYOM

Figure 1. No. 55 in the King series.

duced, no one until now has focused directly on his stereographs. Carol M. Johnson, curator of 19th century American photography at the Prints and Photographs Division of the Library of Congress, has written a long overdue account of Timothy H. O'Sulli-

van's stereographs of the King and Wheeler surveys. She presents a broad view of them, from their creation in the field to a history of their publication and their final disposition.

She writes, "Scholars often dis-

miss stereographs as gimmicky..." in doing so they ignore the important role they played in American culture throughout the last half of the 19th and early part of the 20th century. Here she makes a resolute effort to rectify that situation by producing a well-researched scholarly study of the stereographs of

Figure 2. No. 56 in the King series, "Flaming Gorge on Green River, Wyoming, 1872." National Archives record number 77-KW-56.



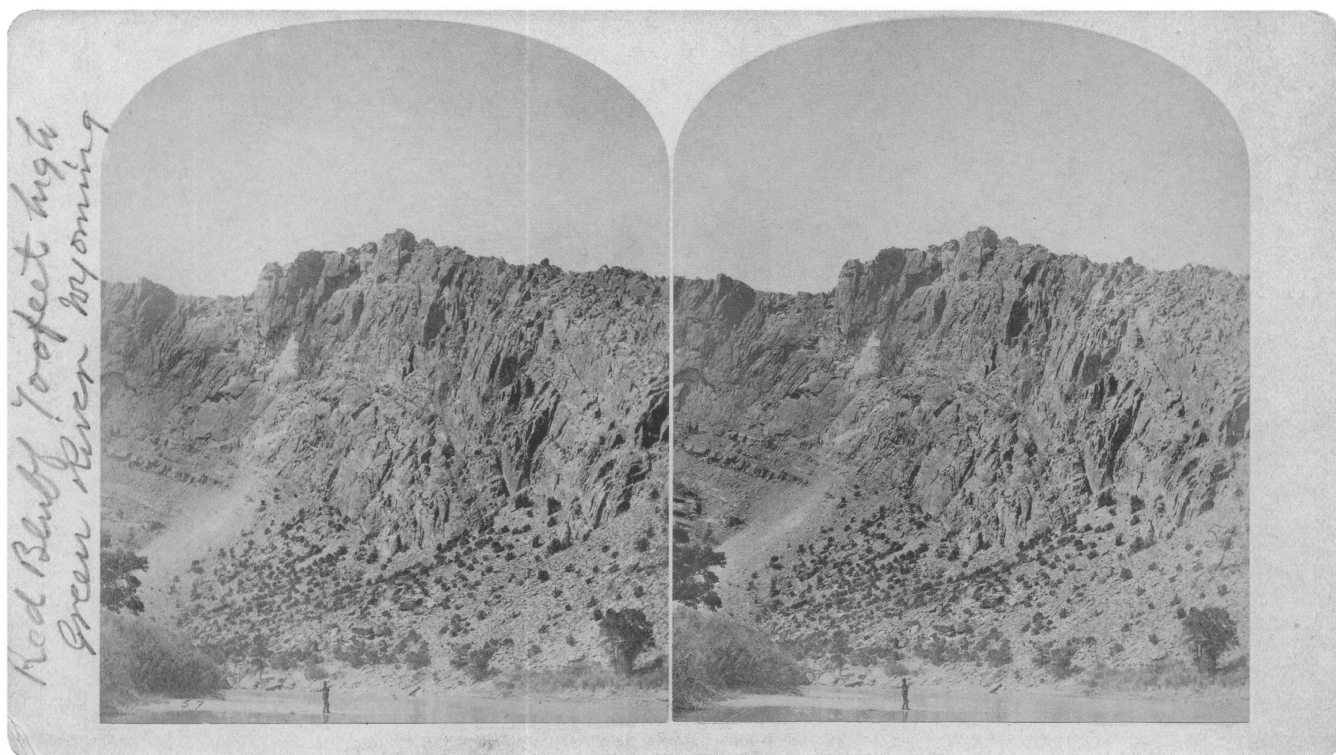


Figure 3. No. 57 in the King series.

Timothy O'Sullivan.

For the reader not familiar with the stereograph, she has a brief introduction explaining them as well as a few words about their history and an illustration showing a stereoscope in use.

She presents a brief sketch of camp life and general living conditions while working in the field on these government surveys. Like Jurovics she touches on O'Sullivan's early career, then on to his survey work but unlike Jurovics, she places her main emphasis on his stereographs. She discusses the different manner in which he approached his subject depending on whether he was working with a full plate view camera or a stereo camera. She also discusses how O'Sullivan's work with the King Survey differed from that of the Wheeler Expedition. Clarence King, a geologist, led a more scientifically oriented survey and was primarily interested in the study and mapping of the region's geology. Wheeler, an army lieutenant and engineer, had a much more military and political train of thought than King. Therefore, the type, and ultimately the use, of the photographs differed between the two surveys. She writes "Unlike the stereographs O'Sullivan made for

the King survey, his Wheeler survey stereographs provide a visual narrative of the expedition rather than documenting specific landscape features encountered along the team's route. His picturesque views of Black Canyon present an almost day-by-day account of their journey."

From the onset and throughout the survey years Clarence King did not aggressively pursue publishing or exhibiting survey photography. His primary use of it was to illustrate his official reports. King did have O'Sullivan prepare survey images for the 1873 Vienna Expo and the 1876 Centennial Exposition at Philadelphia but, overall King survey photos never saw the production that Wheeler's did. She writes "there is no evidence to suggest that the King survey stereographs were ever offered for sale to the public." She also states "Although the King survey stereos are exceedingly rare today—and were never produced in great numbers—stereographs from the Wheeler expedition were published in multiple editions in the 1870s and survive in many archives and private collections. George Wheeler himself persistently urged the government to distribute photographs made during his

expedition." Despite the extreme rarity of the King stereographs she has managed to locate and catalog well over 100 of them in Appendix 1. She has also reproduced a few images of them in her essay and appendix 1.

The book contains a set of seven appendixes which catalog all known stereographs of the King and Wheeler surveys. Appendix 1 catalogs all known stereographs mounted on official "Explorations of the 40th Parallel" mounts; they are numbered from 1 through 233 with several gaps. Just a note of interest, the King survey stereograph series is not chronologically arranged in the manner of the multiple series issued by Wheeler. King conducted surveys in 1867, '68, '69 and '72; the series contains stereographs from all four years. The first numbers in the King series are from the 1872 survey, and the series ends with stereographs taken by A.J. Russell in the Unita Mountains in 1869. Also, for those not completely familiar with the chronology and schedule of these surveys, Timothy O'Sullivan was the official photographer for King during all four years (1867, '68, '69 & '72). Wheeler employed a photographer on four of his surveys (1871, '72, '73 & '74); O'Sullivan was with Wheeler in 1871, 1873 and 1874. William Bell

EXPEDITION OF 1871, 1872 OF 1873.



1st Lieut. GEO. M. WHEELER,
CORPS OF ENGINEERS COMMANDING.

Figure 4. Although this view is not identified on the card, it appears in the Wheeler New Mexico series as "No. 20, "Blackwater Canon, near Zuni Pueblo" from the 1873 expedition.

replaced O'Sullivan on Wheeler's 1872 expedition. Appendixes 2 through 7 catalog all of the Wheeler stereographs. Although none of the book's essays detail information on Bell, to make the Wheeler series complete, all stereographs by Bell during the 1872 season are cataloged in the appendixes.

Survey Stereoview Gaps?

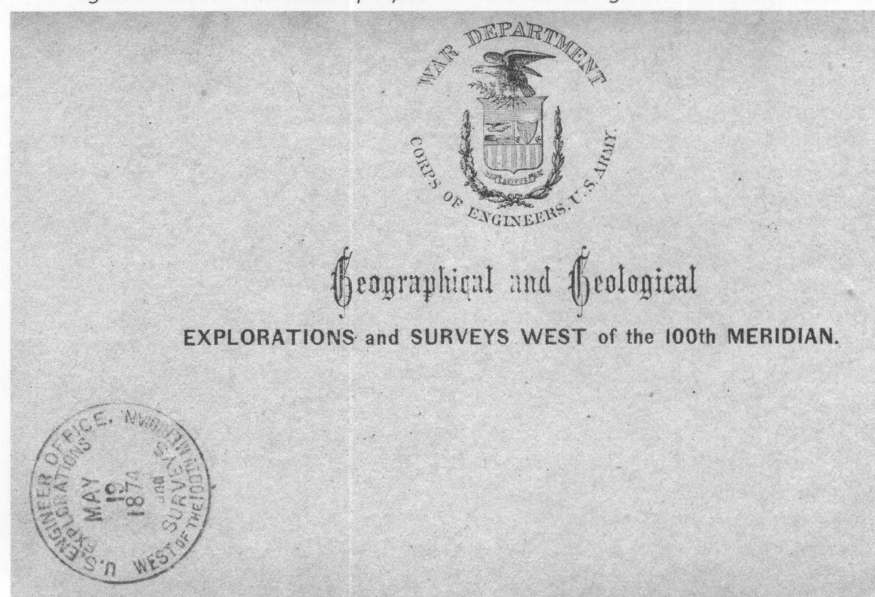
At this point I would like to expand somewhat on the stereoviews cataloged in the appendixes. I would also invite input from anyone that can expand further on them or those who just wish to comment on the book, my review of the book or my comments and observations that follow.

In appendix 1 it is stated: "Extant King survey stereographs on official survey mounts range in number from 1 through 233, with several gaps in the series." It is my belief that the series was issued without any gaps in the numbering sequence—that "somewhere out there" the missing numbers exist, or at least did exist. I base this thought largely on two factors. First, negatives for some of the missing numbers exist in the National Archives and second, the fact that I have in my collection

some of the missing numbers on plain (not official survey) unprinted mounts. Although these stereographs are not on "official" mounts which would identify them as being from the "Exploration of the 40th Parallel" and further ID them with a series number and caption, it can be determined that they are from the King survey. Reproduced in figures 1, 2 and 3 are numbers 55, 56 and 57

from the King survey series. They can be identified as such by the fact that (fig. 1 - #55) is identical to #55 known on an official mount. Although #56 (fig. 2) has not been identified on an official mount, the negative for it exists in the files of the National Archives (record 77-KW-56). Number 57 (fig. 3) has not been identified on an official mount nor does the negative exist at the National Archives, however, record number 77-KN-46 at the National Archives is a full plate negative of a scene at the

Figure 5. Verso detail of multiple year mount shown in fig. 4.



EXPEDITION OF 1871.



1ST LIEUT. GEO. M. WHEELER.
Corps of Engineers, Commanding.

Flaming Gorge in Wyoming by O'Sullivan from the King survey and is nearly identical to #57, likely taken from the same location and during the same time frame as stereo #57. Also, a small number appears on all three of these stereos; they are the result of a number being scratched onto the negative; the numbers are 55, 56 and 57. These stereos on unprinted mounts with the numbers 55 and 56 scratched onto their negatives correspond to the known series numbers. If a stereograph with a series number of 57 turns up on an official mount from the King sur-

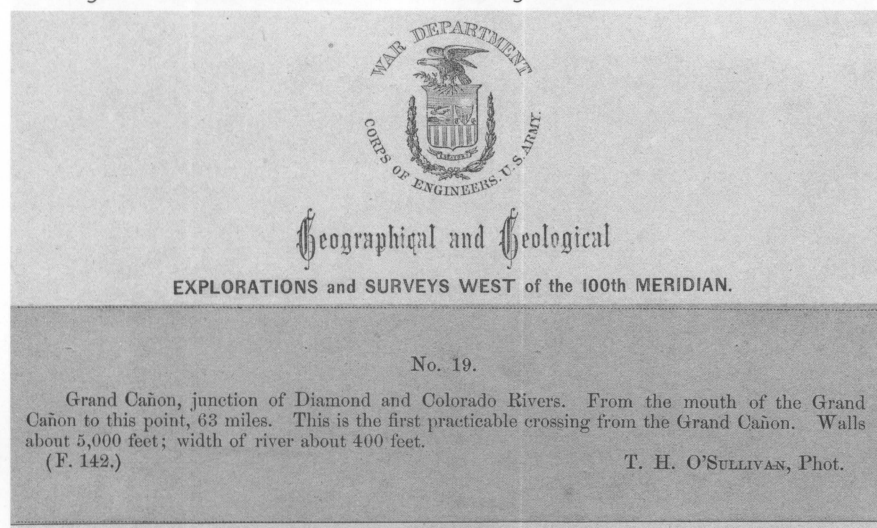
vey, it will likely be identical to the one shown in figure 3. Many of the stereographic negatives from the King survey are missing. The National Archives' "Records of the Office of the Chief of Engineers, Geological Exploration of the Fortieth Parallel - The King Survey, 1867-1872 Stereoscopic Negatives", record group 77-KW has only 135 of the King survey stereo negatives in their files, which were transferred to them from the Office of Chief Engineers in 1940; that

leaves about 100 negatives missing. Also in my collection are six other King survey stereos on plain unprinted mounts that are neither listed in appendix 1 nor have negatives in the National Archives. They have numbers 2, 12, 17, 31, 47 and 97 scratched onto the negatives. Three of them can be identified by a hand written manuscript caption [#17] *High Bluff Echo Canon Utah*; [#47] *Bad Lands Wyoming Terr* and [#97] *Brown Hole from Top on(sic) Green River Canon 3000 ft H. Wyoming*, their numbers can tentatively identify the other three and where they would fit into the series sequence. The numbers assigned them are likely the number each would have if found "somewhere out there" on official mounts. The caption on the stereo in fig. 1 reads "Flaming Bluff Green River Canon [canyon], Wyoming 700 ft high" - the caption on the official mount reads "No. 55 - Looking across Flaming Gorge, Green River Canon, Wyoming Territory." Although the manuscript caption differs somewhat from the one found on the official mount the general information is essentially the same,

(Continued on page 45)

Figure 6. Appendix 5 catalogs a set of 100 stereoviews issued by Wheeler for the 1871, 1872 & 1873 expeditions. Each year has its own set of numbers: 1871=1-23, 1872=1-39 and 1873=1-38. This is No. 19 of the 1871 expedition.

Figure 7. Verso detail of stereoview shown in fig. 6.



Charles Lyman Pond

Buffalo Photographer of Western Expeditions

by Paul Hickman

Chronology

1832

Charles Lyman Pond was born in or near Buffalo, New York.

1855-1858:

He was the blank book maker or bookbinder in Buffalo, New York [three *Directories*].

1861

C. L. Pond was the Daguerreo-type and photographic artist at 198 Main and residence at 20 Elliott [The *Commercial Advertiser Directory for the City of Buffalo*: R. Wheeler and Company, pages 235, 300.]

June 21, 1862

Charles L. Pond was the Ambrotype and photographic artist at 20 Main and lived at 185 North

Division [Thomas' *Buffalo City Directory for 1862*: E. A. Thomas, pages 269, 333.]

June 20, 1863

Pond was the Ambrotype and photographic artist at 202 and 204 Main and residence at 88 North Division [pages 288, 357.]

June 1864

He was the Ambrotype and photographic artist at 202 and 204 Main and lived at 154 North Division [pages 276, 347.]

June 6, 1865

Charles L. Pond and Erastus B. Hambleton were Ambrotype and photographic artists at 202 and 204 Main, Pond residence at 154

Division [C. F. S. Thomas, pages 205, 276 and 343.]

1866

Pond alone, same citation [pages 294 and 367.]

1867

He worked as the Ambrotype and photograph artist at 204 Main and lived at 154 N. Division

[Howard

and Johnson Thomas, pages 346 and 429.]

Pond's curved blindstamp.



American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 602, "Glacier Point from Mirror Lake, Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.





May 1867

The known Pond stereographs, all numbered lower than fifty, were first published on yellow square-cornered cards with "Stereoscopic Harbor Views" on verso.

1868

Pond was the photographer and residence at 310 North Division, where he was to both live and work of the rest of his life [pages 375 and 484.]

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 614, "Yo Semite Falls 2,634 ft. high, (Instantaneous View), Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.

1869

He was the manufacturer of stereoscopic views, and lived at 310 North Division [Buffalo City Directory, Johnson Warren and Company, pages 418 and 539.]

1870

Same citation [pages 467 and 581.]

May 2, 1871

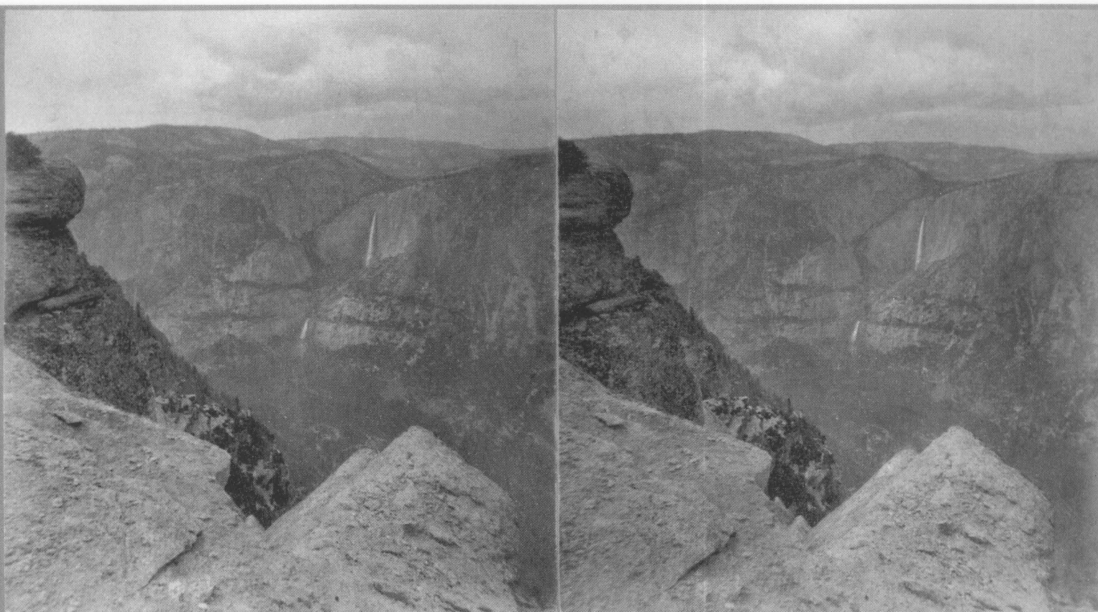
"C. L. Pond, a prominent photographer of Buffalo, arrived in Stockton on Sunday en route to Yosemite. After spending a few days in the city he will proceed by way of the Copperopolis road and Big Oak Flat, to the end of his journey. Mr. Pond came to this coast with a view of taking a large number of stereo views of Yosemite and the Big Trees, and views of the scenery of such other parts of the State as may attract his

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 621, "Yo Semite Valley, California, from Mt. Beatitudo, 3,200 feet above Valley." Albumen prints, Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.



AMERICAN SCENERY,

PHOTOGRAPHED BY



C. L. POND,
BUFFALO, N. Y.

623—Yo Semite Falls and Valley, from Glacier Point, 3,700 above. Yo Semite Valley, California.

attention. . . Mr. Pond, before leaving Buffalo, announced his intention of furnishing stereo views by subscription, and with very little effort received subscriptions for nine thousand pictures, which he furnishes at the rate of six dozen for \$15. He designs to remain at Yosemite five or six weeks, to take advantage of the change of season, development of foliage, etc., to secure the greatest possible variety of views. He

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 623, "Yo Semite Falls and Valley, from Glacier Point, 3,700 above Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. (Also variant negative.)

designs to also visit the Calaveras Grove before returning to this city or San Francisco." ["An Artist en Route to Yosemite," *The Stockton Daily Independent*, volume 20, page 2, column 1, courtesy of Gary D. Lowe.]

May 29, 1871

C. L. Pond of Buffalo, New York, signed the Snow's Register, page 115, courtesy of the late Bill and Mary V. Hood.

June 10, 1871

"There is also a Mr. Pond, a photographer from Buffalo, N. Y., here. Mr. Pond has a pair of the Ross wide angle." T[homas] C. R[ocher], "Correspondence, Yosemite Val-

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 655, "Big Tree, Empire State, Mammoth Tree of Calaveras Co., California." (Pond in foreground). Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. (Also variant negative.)



AMERICAN SCENERY,

PHOTOGRAPHED BY

C. L. POND,
BUFFALO, N. Y.

655—Big Tree, Empire State. Mammoth Trees of Calaveras Co., California



647—Photographer's Camp at the Royal Arches.
Yo Semite Valley, California.

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 647, "Photographer's Camp at the Royal Arches, Yo Semite Valley, California." (Pond at left.) Albumen print. Orange and lavender card. Collection of the late Louis H. Smaus.

ley," *Anthony's Photographic Bulletin* 2 (August 1871), page 269.

July 1, 1871

Same citation [pages 474 and 611.]

August 3, 1871

"C. L. Pond of Buffalo, starts for home to-day with 300 negatives of the Yosemite valley, and 150 of the Big Trees in Calaveras. He will stop in Salt Lake to take views of Utah." "Arrivals [and Departures] at the Big Trees, Calaveras Big Tree, August 3," *The Stockton Daily Independent*, August 4, 1871, volume 21, page 3, column 3, courtesy by Dale T. Rossi.

January 1, 1872

Houseworth, Thomas and Company. *Pacific Coast Scenery*. San Francisco: Thomas Houseworth & Co., 208 stereo halves including

three negatives by Charles L. Pond in the Calaveras Big Tree Grove: 865b, 888b and 918 (self-portraits by Pond). Elsewhere, four stereographs by negatives by Charles L. Pond and positives by Thomas Houseworth and Company in the Calaveras Big Tree Grove: 865b, 865c, 870b and 888b (self-portraits by Pond).

May 29, 1872

C. L. Pond registered again at the Casa Nevada, courtesy again of the late Bill and Mary V. Hood. It has also been reported that I[saac] T[ibbets] Coffin, a stereographic artist based in Snelling and Dutch Flats, California, sold Pond some mining negatives; these could be the hydraulic mining views Pond published as part of his Western series.

1872

He was a publisher of stereoscopic views and residence at 310 North Division [pages 471 and 625.]

1873

Same citation [pages 486 and 649.]

September 1873

C. L. Pond of Buffalo: "Views of California Scenery." "The Exhibition [of the National Photographer Association in Buffalo]," *The Philadelphia Photographer* 10, page 466.

1874

Same citation [pages 501 and 672.]

1875

Same citation [The Courier Company, pages 543 and 736.]

1876

Same citation [pages 553 and 742.]

1877

Same citation [pages 533 and 722.]

1878

Pond was the photographer and manufacturer of stereoscopic views at 348 Main and lived at 310 North Division [pages 519, 705 and 723.]

1879

His work and residence at 310 North Division [pages 533 and 726.]

1880

A boarder Maggie Pettit was living with Pond and his wife Mary, who listed her occupation as a photo printer.

June 28, 1880

Same citation [pages 547 and 741.]

1881

Same citation [pages 566 and 762.]

1882

At the age of circa fifty, Pond abandoned photography and took up the manufacture of railroad shipping accessories.

1884

His wife died at age fifty.

June 7, 1891

Charles L. Pond died at age fifty-eight in Buffalo, New York. [*The Buffalo Courier*, June 8, 1891, page 6, column 6, courtesy of George Miles]. He died at age fifty-nine at 310 North Division Street. [*Buffalo Evening News*, June 9, 1891, page 1, courtesy of Cynthia Van Ness].

Bibliography

January/February 1984: Palmquist, Peter E. "C. L. Pond: A Stereoscopic Gadabout Visits Yosemite." *Stereo World* 10, pages 18-20, back cover.

Spring 1998: Rossi, Dale T. and Redding, Paul. "C. L. Pond of Buffalo N. Y.: Pioneer Stereo Photographer." *Western New York Heritage*, pages 41-54.

2001: Palmquist, Peter E. "The Pioneer: Landscapes and Studio." *Capturing Light: Masterpieces of California Photography, 1850 to the Present* (Oakland: Oakland Museum of California), pages 37, 347.

2009: Lowe, Gary D., with information on C. L. Pond from Dale T. Rossi. *Before the Works: The Bancroft-Pond-Houseworth Tourist Party among the Big Trees, May 1871: The Calaveras Big Trees Stereoscopic Views of C. L. Pond, Buffalo, New York and some of the May 1871 Stereoviews of Thomas Houseworth & Co., San Francisco, California and J. C. Scripture, Big Tree, Calaveras County, California.* Livermore, California: Lowe Brothers Publishing.

Stereographs of the Sixth and Seventh Hundreds Dated 1871 and 1872

600. El Capitan, 3,300 feet high, Yo Semite, California.
601. North Dome, 3,725 feet high, Yo Semite Valley, California.
602. Glacier Point, from Mirror Lake, Yo Semite Valley, California.
603. Three Brothers, 4,200 feet high, Yo Semite Valley, California. Also published by no maker as No. 477.
604. South Dome, 6,000 feet high, (from point three miles off), Yo Semite Valley, California.
605. Cap of Liberty, 4,000 feet high (Snow's first building: no rock slide), Yo Semite Valley, California [addition to Alpine House under construction, but no rock slide].
606. Bridal Veil Fall, 940 feet high, Yo Semite Valley, California.
607. Mirror Lake and Mount Watkins, Yo Semite Valley, California.
608. Lower Yo Semite Fall, 600 feet high, Yo Semite Valley, California.
609. Glacier Point, 3700 feet high from point two miles off, Yo Semite Valley, California. Also variant negative (three figures on log and different cloud negative).
610. Washington Tower and Cloud's Rest, from Merced River, Yo Semite Valley, California.
611. Vernal Fall and Cap of Liberty, Yo Semite Valley, California.
612. Cathedral Rocks and Spires, 2,600 feet high, Yo Semite Valley, California.
613. Sentinel Rock, 3,720 ft. high, and Hutchings' Hotel [no porch, eight windows, fence running towards river].
614. Yo Semite Falls, 2,634 ft. high, (Instantaneous View), Yo Semite Valley, California.
615. Mirror View, Washington Column, Clouds Rest and South Dome, Yo Semite Valley, California.
616. South Dome and Cloud's Rest, from Glacier Point, Yo Semite Valley, California. Also variant negative.
617. Mirror View, Cathedral Rocks, Yo Semite Valley, California.
618. Beauties of the Yo Semite Valley, California.
619. Mountain Pass from Vernal Fall trail.
620. Yo Semite Valley, California, From top of Clouds Rest, 10,450 feet above Sea.
621. Yo Semite Valley, California, from Mount Beatitude, 3,200 feet above the Valley.
622. Vernal and Nevada Falls, from Glacier Point, Yo Semite Valley, California.
623. Yo Semite Falls and Valley, from Glacier Point 3,700 feet above Yo Semite Valley, California. Also variant negative.
624. Yo Semite Falls 1,600 feet high, in a gale, Yo Semite Valley, California.
625. Yo Semite Fall, (Mirror View).
626. Sierra Nevada Mts. from Clouds Rest, 10,450 feet above the Sea, Yo Semite Valley, California. Also published by no maker as No. 489.
627. Summit of Cloud's Rest, 10,450 feet above the Sea.
628. Summit Peaks of Clouds Rest, 10,450 above the Sea. Also published by no maker as No. 470.
629. View in the South Canon, Yo Semite Valley, California.
630. View at Cape Horn, C. P. R. R. California.
631. Cape Horn, C. P. R. R.

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 656, "Pioneers Cabin, diameter 32 feet, Mammoth Trees of Calaveras Co., California." (Pond third at left.) Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. (Also variant negative.)





660—Father of the Forest, circumference 112 feet.
Mammoth Trees of Calaveras Co., California.

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 660, "Father of the Forest, circumference 112 feet, Mammoth Trees of Calaveras Co., California." (Pond in middle ground.) Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas. (Also variant negative that was also published by no maker as No. 480.)

631. Column Rock, Wasatch Mountain, Utah.

632. Cap of Liberty, and Nevada Fall, Yo Semite Valley, California [addition to Alpine House not yet under construction, no rock slide].

633. View looking out of Rock Grotto, Yo Semite Valley, California.

634. Mirror Lake, and Old Man Mountain, Yo Semite Valley, California.

635. Mirror View, Mary's Lake, Sierra Nevada Mountains, California.

636. Cathedral Rock, 2,600 ft. high, from Eagle Point.

637. San Francisco, California, from Russian Hill.

638. San Francisco, California, from Russian Hill.

639. Telegraph Hill, San Francisco.

640. Salt Lake City, Utah.

641. Salt Lake City, Utah, showing Mormon Tabernacle.

642. Brigham Young's Residence, Salt Lake City, Utah.

643. Donner Mountains, showing Snow Sheds, C. P. R. R., California

644. New Mormon Tabernacle, Salt Lake City, Utah.

645. Interior Mormon Tabernacle, Salt Lake City, Utah

646. Monument Rock, U. P. R. R. Weber Valley, Utah.

647. Photographer's Camp at the Royal Arches, Yo Semite Valley, California.

648. Donner Mountain, Showing Snow Shed, C. P. R. R.

648. Witch Rocks, U. P. R. R. Utah Ter.

649. Hydraulic Gold Mining, California.

650. The Abandoned Gold Mine, California.

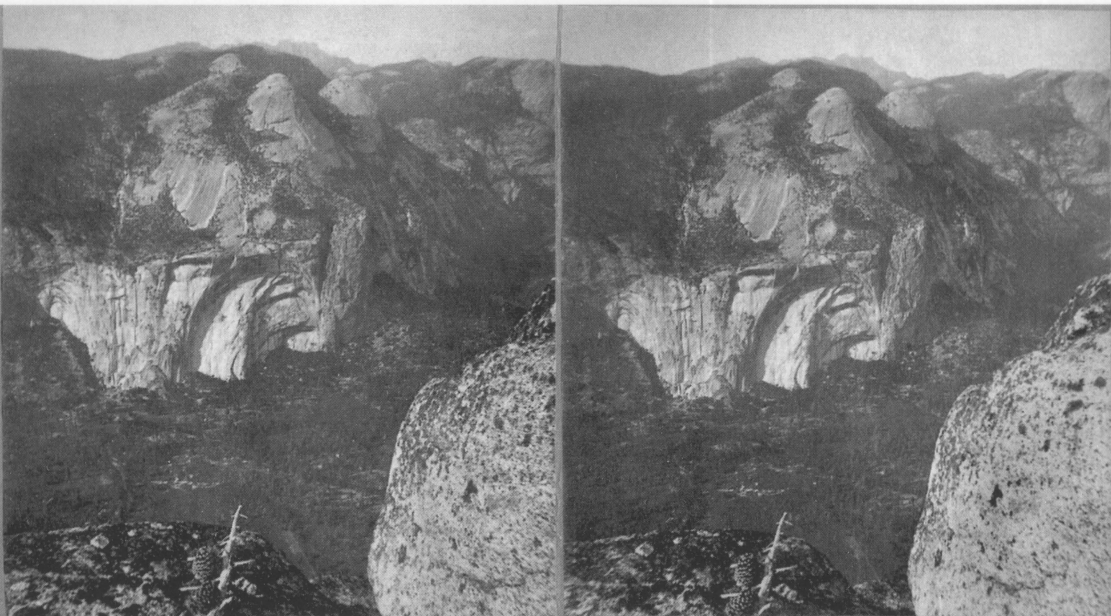
American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 684, "Ribbon Fall, 3,300 feet high, Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.



684—Ribbon Fall, 3,300 feet high.
Yo Semite Valley, California.

AMERICAN SCENERY,

PHOTOGRAPHED BY



C. L. POND,
BUFFALO, N. Y.

686—Royal Arches, and North Dome, from Glacier Point,
Yo Semite Valley, California.

- 651. Placer Gold Mining, Murphy's, California.
- 652. [Spears and Perry] Hotel at the Calaveras Grove of Mammoth Trees, California.
- 653. Section of the Original Big Tree, Diameter 25 ft., Mammoth Trees of Calaveras Co., California. Also variant negative.
- 654. But [sic] and Section of the Original Big Tree, Diameter 25 feet, Mammoth Trees of Calaveras Co., California. Also variant negative that was also published by no maker as No. 481.
- 655. Big Tree, Empire State, Circumference 84 feet, height 325 feet, Mammoth

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 686, "Royal Arches, and North Dome, from Glacier Point, Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.

Trees of Calaveras Co., California.
Also variant negative.

- 656. Pioneer's Cabin, diameter [sic] 32 feet, Mammoth Trees of Calaveras Co., Cal. Also variant negative.
- 657. House on the Stump of the Original Big Trees, Diameter 32 ft., Mammoth Trees of Calaveras Co., California.
- 658. Interior of House built on the original Big Tree stump, Mammoth Trees of Calaveras Co., California. Also

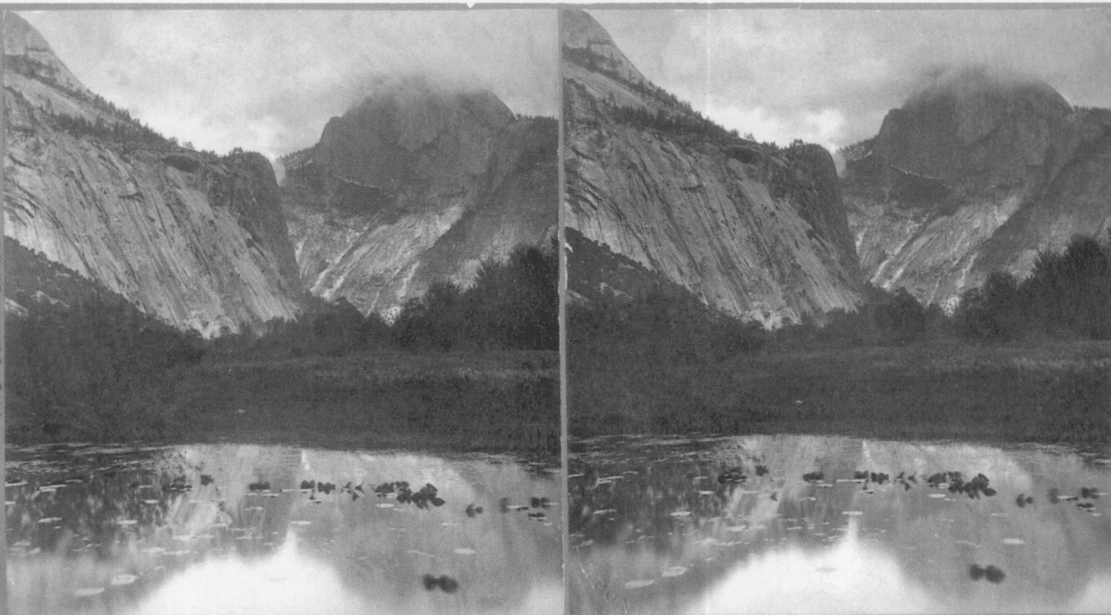
published by O. F. Lohrer as No. 484 and by no maker as No. 484.

- 659. Mother of the Forest, circumference 28 feet, bark off, Mammoth Tree of Calaveras Co., California. Also variant negative.
- 660. Father of the Forest, circumference 112 feet, Mammoth Tree of Calaveras Co., California. Also variant negative (660B) that was also published by no maker as No. 480.
- 661. Hercules, showing size of tree 300 feet from the root, Mammoth Tree of Calaveras Co., California.

American Scenery, Photographed by C. L. Pond, Buffalo, N. Y. No. 724, "South Dome, 6,000 ft. high, (Summit among the Clouds), Yo Semite Valley, California." Albumen prints. Orange and lavender card. Paul and Kathy Hickman, Jonesboro, Arkansas.

AMERICAN SCENERY,

PHOTOGRAPHED BY



C. L. POND,
BUFFALO, N. Y.

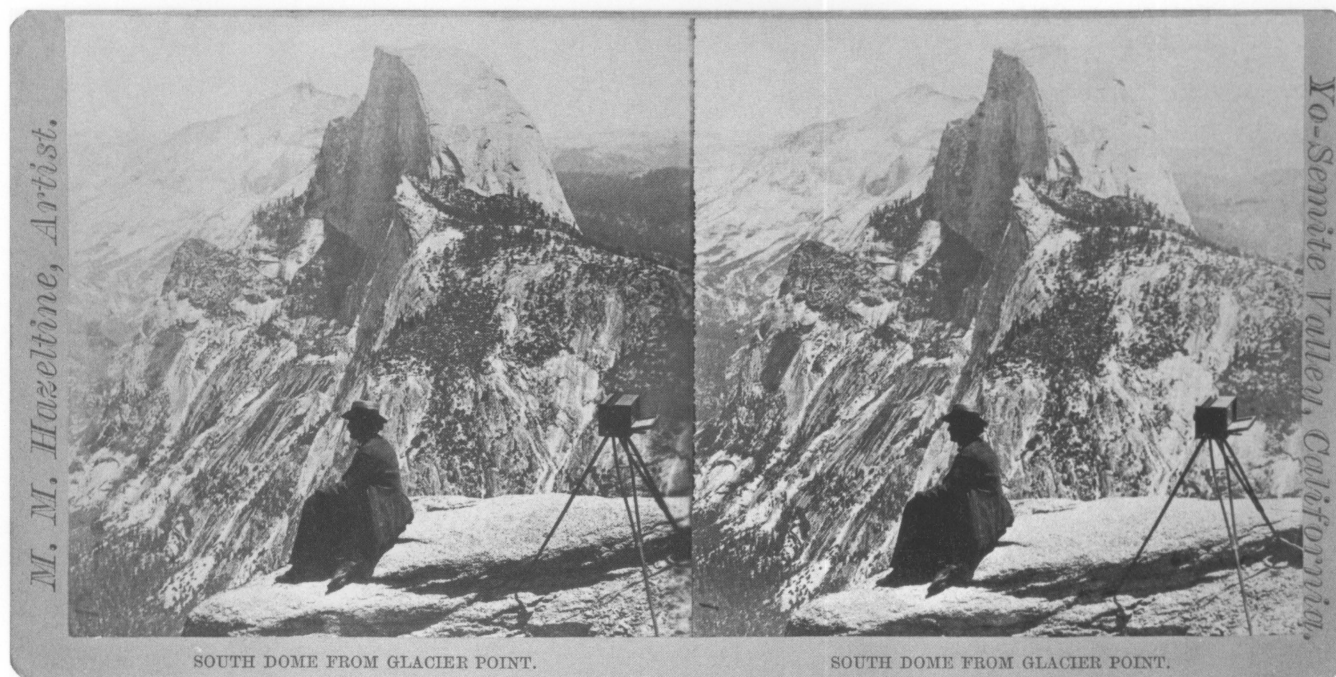
724—South Dome 6,000 ft. high, (Summit among the Clouds),
Yo Semite Valley, California.

662. Entrance to the Horseback Ride in the Father of the Forest, Mammoth Trees of Calaveras Co., California.
663. Interior of Snow Shed, Summit Station, Sierra Nevada Mts., C. P. R. R.
664. Ribbon Fall, 3,300 feet high, Yo Semite Valley, California.
665. Snow Sheds, Summit, Sierra Nevada Mts., C. P. R. R.
666. Sierra Nevada Mts., showing Snow Sheds, C. P. R. R.
667. Long Ravine Bridge, C. P. R. R., California. Also variant negative.
668. Mirror View, Mary's Lake, C. P. R. R.
669. Mirror View, Lake Angeline, Sierra Nevada Mts., Cal.
670. Mts. Starr King, Sierra Nevada Mts.
671. Castle Peak, Sierra Nevada Mts., 10,000 feet altitude.
672. Donner Lake, Sierra Nevada Mts.
- 673.
674. Mirror Lake and its reflections, Yo Semite Valley, California.
675. Glacier Point and Washington Column from Mirror Lake, Yo Semite Valley, California. Also published by Francis Hendricks as No. 469 and on the "Stereoscopic Gems" imprint.
676. El Capitan, 3,300 feet high, from Merced River, Yo Semite Valley, California.
677. North and South Domes, Cloud's Rest in distance, Yo Semite Valley, California.
678. Cap of Liberty Pass, Clouds Rest in distance, Yo Semite Valley, California
679. Beautiful Landscape, Yo Semite Valley, California. Also published by no maker as No. 471.
680. Cathedral Rocks, 2,600 feet high, Yo Semite Valley, California.
681. Fallen Tree Hercules, 325 feet long, Circumference 93 feet, Mammoth Trees of Calaveras Co., California.
681. South Dome, 6,000 feet high, from Glacier Point, Yo Semite Valley, California.
682. Eagle Peak, 3,700 feet high, Yo Semite Valley, California.
683. Yo Semite Falls, 2,634 feet high, (Group of Spanish Cattle), Yo Semite Valley, California. Also published by E. Eldredge and Son as No. 476.
684. Ribbon Fall, 3,300 feet high, Yo Semite Valley, California.
685. North Dome, 3,725 ft. from Vernal Fall Trail.
686. Royal Arches, and North Dome, from Glacier Point, Yo Semite Valley, California.
687. Indian Canon, from foot of Sentinel Rock, Yo Semite Valley, California.
688. View from top of Vernal Fall, Yo Semite Valley, California.
689. View in South Canon, from Alpine Trail.
690. Upper and Lower Yo Semite Falls, 2,634 ft. high, near View, Yo Semite Valley, California.
691. View from Inspiration Point, Yo Semite Valley, California.



American Scenery, Photographed by C. L. Pond, Buffalo, N. Y." No. 726, "Photographer's first glimpse of the Yo Semite Valley, California." (Pond on mule, stereoscopic camera and tripod on right shoulder). Albumen print. Orange and lavender card. Collection of the late Louis H. Smaus.

692. Summit Peak of Cloud's Rest, Yo Semite Valley, California.
693. Big Tree A. Lincoln, 320 feet high, Mammoth Trees of Calaveras Co., California.
694. Fallen Tree Hercules, 325 ft. long, circumference 97 ft., Mammoth Trees of Calaveras Co., California.
695. Fallen tree Father of the Forest, circumference 112 at base, Mammoth Trees of Calaveras Co., California.
696. Fallen Tree, Father of the Forest, circumference 112 feet, Mammoth Trees of Calaveras Co., California.
697. Old Dominion and Uncle Tom's Cabin, Mammoth Trees of Calaveras Co., California.
697. Root of the Big Tree Miner Cabin, circumference 218 feet, Mammoth Trees of Calaveras Co., California.
698. Big Tree James D. Dana, circumference 68 ft., Mammoth Trees of Calaveras Co., California.
699. Old Dominion and Uncle Tom's Cabin, Mammoth Trees of Calaveras Co., California.
700. Big Tree Group, Mammoth Trees of Calaveras Co., California.
701. One of the fallen Big Trees, circumference 97 feet, length 325 feet, Mammoth Trees of Calaveras Co., California. Also published by Francis Hendricks as No. 472.
702. Stairs at Vernal Falls, Yo Semite Valley, California.
703. San Francisco, California, showing coast range of Mts.
704. San Francisco, California, showing coast range of Mts.
705. Nevada Falls, 713 feet high, Yo Semite Valley, California.
706. Mirror View of the North Dome, Yo Semite Valley, California
707. Yo Semite Falls, 2,634 ft. high, from point 1 mile.
708. Yo Semite Falls, 2,634 ft. high, Lost Arrow on right, Yo Semite Valley, California. Also published by Francis Hendricks as No. 473 and by no maker as No. 473.
709. Looking up the Valley from Eagle Point, Yo Semite Valley, California.
710. Looking up the Valley from the foot of Inspiration Point Trail, Yo Semite Valley, California.



M. M. Hazeltine, Artist.

Yo-Semite Valley, California.

SOUTH DOME FROM GLACIER POINT.

SOUTH DOME FROM GLACIER POINT.

710. Mother of the Forest, diameter 27 feet, 327 feet high, Mammoth Trees of Calaveras Co., California. [Same negative as 659A]

711.

712. View from Alpine Trail, Yo Semite Valley, California.

713. Nevada Falls, from Alpine Trail, Yo Semite Valley, California.

714. Liberty Cap pass, from Snow's Bridge, Yo Semite Valley, California.

715. Bridal Veil Fall, from Mariposa Trail, Yo Semite Valley, California.

716. Photographer's Camp on Glacier Mountain, 3,720 ft. above Yo Semite Valley, California.

717. Nevada Falls, 713 ft. high, from Rustic Bridge, Yo Semite Valley, California.

718. Merced Group, Sierra Nevada Mountains, from Clouds Rest, 10,450 ft. above the sea.

719. Eagle Point, (Angel Cloud floating over the valley), Yo Semite Valley, California.

720. Yo Semite Falls, from Alpine Trail, Crenoline Point on right, Yo Semite Valley, California.

721. Half Dome, from Alpine Trail, Yo Semite Valley, California.

722. Half Dome, Mt. Broderick and Cap of Liberty, Yo Semite Valley, California.

723. Cap of Liberty and Nevada Falls, Yo Semite Valley, California.

724. South Dome 6,000 ft. high (Summit among the Clouds), Yo Semite Valley, California.

725. My Day's Sport, Trout from Merced River, Yo Semite Valley, California.

726. Photographer's first Glimpse of the Yo Semite Valley, California.

727. Snow's Hotel and Party of Tourists at Cap of Liberty, Yo Semite Valley, California.

728. View at top of Vernal Falls, Yo Semite Valley, California.

M. M. Hazeltine, Artist. Yo-Semite Valley, California. No number. "South Dome from Glacier Point." (Pond with stereoscopic camera and tripod, Summer of 1871.) Albumen prints. Orange and lavender card. Collection of the late Peter E. Palmquist.

729. Bridal Veil, 940 ft. high, and Union Rocks, Yo Semite Valley, California.

730. Party of Tourists on Alpine Trail, to Cap of Liberty and Nevada Falls, Yo Semite Valley, California [addition to Alpine House not yet under construction, no rock slide].

731. Yo Semite Valley, from Inspiration Point 3000 feet above, Yo Semite Valley, California.

732. Interior of Rock Grotto at Vernal Fall Stairs.

733. Stairs leaving out of Rock Grotto, at Vernal Falls, Yo Semite Valley, California.

734. Yo Semite Falls, 2,634 ft. high, (with Party of Tourists), Yo Semite Valley, California

735. Yo Semite Falls, 2,634 feet high, (mirror view), Yo Semite Valley, California.

736. Cathedral Rocks, 2,600 ft. high, from Eagle Point, Yo Semite Valley, California.

737. Exterior of Snow Sheds, C. P. R. R., Sierra Nevada Mountains, California.

738. Summit Sierra Nevada Mountains, California, Views on Line of Rail Road.

739. Snow Sheds, C. P. R. R. Summit Sierra Nevada Mountains, California.

740. Beauties of the Sierra Nevada Mountain, Lake Angeline, California.

741. Beauties of the Sierra Nevada Mountain, Mary's Lake, California

742. Overland Stage Route, Sierra Nevada Mountains, California.

743.

744. Rock Echo Canyon, Utah.

745. View in the Wahsatch Mountains, Utah.

746. Monument Rock, U. P. R. R., Weber Valley, Utah.

747.

748. Summit, Sierra Nevada Mountains, California.

749. Hydraulic Gold Mining at Dutch Flat, California.

750. Hydraulic Gold Mining at Gold Run, California.

751. Remains of the Original Horseback Ride through log, Mammoth Trees of Calaveras Co., California.

752.

753. Daniel Webster and Siamese Twins, Mammoth Trees of Calaveras Co., California.

754. Big Tree, Old Republican, Mammoth Trees of Calaveras Co., California.

755. Root of the Big Tree, Eagle Wing, Mammoth Trees of Calaveras Co., California.

756. Party of Tourists of the Big Tree Group, Mammoth Trees of Calaveras Co., California.

757. Horseback Ride, 80 ft. through Father of the Forest, Interior View, Mammoth Trees of Calaveras Co., California.

758. Party of Tourists at the Big Trees Grove, Mammoth Trees of Calaveras Co., California.

759. The Grizzly Giant, circumference 101 feet, Mammoth Trees of Mariposa Co., California.

760. The Grizzly Giant, 101 Feet in Circumference, Mammoth Trees of Mariposa Co., California.

761. South Dome and Clouds Rest, from Glacier Point, Yo Semite Valley, California.

762. Glacier Mountains, 3,720 feet high, Yo Semite Valley, California.

763. Three Brothers, 4,200 feet high from Merced River, Yo Semite Valley, California.
764. Vernal Falls, 350 feet high and Cap of Liberty, Yo Semite Valley, California.
765. Nevada Falls, 713 ft. high, Yo Semite Valley, California.
766. Sierra Nevada Mountains, from Glacier Point, Yo Semite Valley, California.
767. Beauties of Mirror Lake, Yo Semite Valley, California.
768. Mirror Lake and Mount Watkins, Yo Semite Valley, California.
769. Mirror Lake and Mount Watkins in the distance, Yo Semite Valley, California.
770. Mirror Lake and Mount Watkins, Yo Semite Valley, California.
771. Butt-end section of Original Big Tree, diameter 25 feet, Mammoth Trees of Calaveras Co., California.
772. Three Brothers, 4,200 feet high, Yo Semite Valley, California.
773. One of the fallen Big Trees, circumference 978 feet, Mammoth Trees of Calaveras Co., California.
774. Exterior of Snow Sheds C. P. R. R., Sierra Nevada Mountains.
775. Cap of Liberty Pass, from rustic bridge, Yo Semite Valley, California.
776. Beautiful Landscape, Yo Semite Valley, California.
777. Washington Tower and South Dome, 6,000 ft. high, Yo Semite Valley, California.
778. View on summit of Clouds Rest, 10,450 ft. above the sea, Yo Semite Valley, California.
- 779.
- 780.
781. Cap of Liberty, 4,000 feet high (sunrise), Yo Semite Valley, California [addition to Alpine House under construction, no rock slide].
782. Mirror Lake Canon from top of Glacier Mountains, 3,720 ft. above Yo Semite Valley, California.
783. South Dome and Clouds Rest, from Glacier Mountain, Yo Semite Valley, California.
784. Cap of Liberty, Yo Semite Valley, California [Snow's first building].
785. Sentinel Rock and Hutchings' Hotel, Yo Semite Valley, California.
786. View on Summits of Clouds Rest, 10,450 ft. above the sea, Yo Semite Valley, California.
787. Salt Lake City, Utah, from Temple Street Hill, Views on Line of Rail Road.
- 788.
789. Interior of New Mormon Tabernacle, Salt Lake City, Utah, Views in Line of Rail Road.

Major and minor contributions to the check list were provided by Virginia Adams Collection of Center for Creative Photography of University of Arizona of Tucson, Arizona, Millie L. Anderson, Bancroft Library of University of California of Berkeley, California, Cali-

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County Historical Society of Buffalo, New York, John Waldsmith, John Weiler, Allen and Hilary Weiner, Dave and Cyndi Wood and Barbara L. Beroza, Curator of Collections of the Yosemite Museum of Yosemite National Park, California.

The check list is a work in progress. I would appreciate you forwarding the numbers and complete titles of any of the following views if in your collection: 673, 711, 743, 747, 752, 779-780 and 788. The Catalog includes examples of photographs on the imprints of another publisher of a duplicate or copy negative or anonymous imprint: Francis Hendricks of Syracuse, New York, as No. 460s-470s; E. Eldredge and Son of West Chester, Pennsylvania, as 470s; O. F. Lohrer of Dubuque, Iowa, as No. 480s; on the "Stereoscopic Gems" imprint and by maker as No. 470s-480s. Please direct information about views of all subjects to Paul Hickman, 1306 Warner Avenue, Jonesboro, AR 72401, telephone 1-870-931-0234, email: phickman@astate.edu. I thank you, in advance, for your assistance. ☞☞

Civil War in Full Page 3-D

(Continued from page 33)

guns in popular history books is here enriched by the inclusion of several views showing African Americans as slaves, troops and workers in areas of conflict. Prisoners and prisons also get more than the usual coverage, along with a prisoner exchange ship.

As the author points out, "This is a picture book with narrative captions, not intended to be a scholarly, footnoted reference work." The photographers/publishers are credited for individual images on the last page, but the original view titles are not used and of course the anaglyphic enlargements preclude showing the card design, logos etc. Those wishing an extensive collection of full stereoview reproductions with background about both subjects and photographers should look for Bob Zeller's two-volume *The Civil*

War in Depth, Chronicle Books 1997 and 2000. One thing to be noted about most books to have reproduced full views is that strong magnification reveals more dots than details, a problem at least partly solved in the anaglyphic enlargements in *The Civil War – A History in 3-D*. The ultimate solution, although expensive, would someday be a major collection of these views reproduced like those in Brian May and Elena Vidal's *A Village Lost and Found*, where screenless printing preserves detail even through a strong viewer like that book's folding OWL.

(Author Copley presented a wide selection of the restored stereos in *The Civil War – A History in 3-D* in his Stereo Theater program at NSA 2010 in Huron, Ohio.) ☞☞

NSA Treasurer's Report for 2009

The accompanying table summarizes the NSA revenues and expenses for the calendar year 2009.

The Board has directed changing the printer of *Stereo World* to reduce the printing costs to bring ordinary expenses in line with membership dues. The current operating cost structure was created when the NSA had many more members than currently.

The last of the library commercial goods were sold in 2009. The resulting balance in the Oliver Wendell Holmes Stereographic Endowment Fund is \$129,188.34. The current low interest rates do not provide much investment income. However, the Board decided to maintain the Fund in conservative CDs, rather than risk losing the principal in these uncertain times. The Board welcomes suggestions from the membership on how to utilize the income revenue from the Fund to promote 3-D and the NSA.

Don Gibbs retired in 2009 as back issue and book service representative after many years of service in that capacity. Since the Internet has made books on 3-D fairly readily available and there is a Stereo World DVD, the book service has been closed and the remaining inventory sold to the membership at the 2010 convention. There will be a significant writedown of the *Total inventory* value on the 2010 financial report due to the actual sales revenue generated from the back issues of *Stereo World* compared with their nominal inventory value. That will be an accounting loss (non-cash), since the production and printing expenses occurred and were paid for long ago.

The research materials from the book service have been scanned and OCR-ed into searchable pdf files. After some cleanup, they will be made available on a DVD for purchase, similar to the arrangement for back issues of *Stereo World*. The included lists of views were largely collected under the direction of Tex Treadwell. The view lists need to be updated to reflect the increased knowledge of

January 1 through December 31, 2009

Revenue

\$54,823.55	member dues
\$2,123.91	<i>Stereo World</i> ads
\$742.18	book service and back issues
\$16,789.38	2009 Convention
\$7,847.00	gross auction revenue
\$5,111.77	donations
\$9,371.53	library and <i>Stereo World</i> sales
\$2,131.40	bank interest on OWHSEF
\$98,940.72	TOTAL REVENUE 2009

Expenses

\$173.36	bank fees
\$471.00	bad checks
\$7,639.26	convention expenses - 2009 & 2010
\$8,649.47	auction expenses
\$1,732.62	administrative expense
\$7,200.00	membership
\$1,181.64	2008 book service printing and postage
\$30.00	2008 and 2009 Corporate Registrations
\$35,131.50	<i>Stereo World</i> production and printing
\$21,714.23	<i>Stereo World</i> and renewal mailing
\$1,815.00	storage fees
\$120.00	memberships
\$8,012.15	inventory writedown on goods sold and depreciation
\$93,870.23	TOTAL EXPENSES 2009
\$5,070.49	Net Revenue 2009
\$206,912.00	Net Assets 12/31/2008
\$211,982.49	Net Assets 12/31/2009
\$129,188.34	Total OWHSEF CDs
\$48,768.15	Ending 12/31/2009 balance
\$34,026.00	Total inventory
\$211,982.49	Net Assets 12/31/2009

the past several years. Details of a "list adoption" program will be in a future issue of *Stereo World*. If you wish to help with that process, please contact me. The DVD will be released before the completion of

that updating process and will be updated as the research materials are enhanced.

Submitted by Bill Moll, immediate past Treasurer (WHMoll@aol.com and 706-859-7726).

Diane Rulien, Broker/Realtor



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stereoscopic event or at the
3D Center in Portland.



The Civil War

A History in 3-D

Restored Stereo Photographs from 1861-1865
With Historical Narrative
Includes 2 pairs of 3-D Glasses

Richard Loren Copley

Civil War in Full Page 3-D

review by John Dennis

with a paragraph below describing the historical or military context of the image. A few pages are shared by two anaglyphs, one cropped to a horizontal for-

mat across the page and one as a smaller, one-quarter page image. (Three images are conversions, done with skill and care, and identified as such on the same page as the photographer credits.) Just as interesting as the quality of the images is the variety. The usual concentration on bodies, ruins and

(Continued on page 31)

The reproduction of vintage stereoviews in anaglyphic format for books doesn't always go well, and in some cases the usual practice of publishing only the left or right image actually would have produced better results. That's why it was such a delight to open the pages of *The Civil War - A History in 3-D* by Richard Loren Copley. The NSA member has been an active stereographer for over 25 years, as well as a teacher, museum exhibit designer and website builder. His skills and deep interest in history combined to produce a book filled with beautifully restored stereos, printed as delightfully viewable anaglyphs with quite minimal ghosting.

Most of the book's 68 pages are occupied by a single stereo, blown up to about 7 x 8 inches

Page 50 features this unattributed view of African American men repairing tracks near Murfreesboro, TN following the Union victory at the Battle of Stones River in January, 1863.



The Civil War - A History in 3-D

by Richard Loren Copley, 2009.
Wirebound, 8.5 x 11", 68 pages,
73 anaglyphic stereos. ISBN:
978-0-9823980-0-5. \$19.95 plus
\$3 shipping & handling from Copleys
Graphics LLC, 467 Arnold Lake Road,
Milford, NY 13807 www.civilwar3d.com.

The W3 Arrives!

In a surprise move, Fujifilm introduced their generally anticipated sequel to the W1 digital stereo camera in mid August, the FinePix REAL 3D Digital Camera W3. (A "W2" was skipped—not an encouraging numeral to be applied to a 3-D camera!) Among the most interesting news is that the W3 price on the Fujifilm website is \$100 less than the W1, at \$499.95.

The W3 features several improvements over the W1, although not of course all that had been proposed in articles or on line by the W1s most intense users. The W3 shoots 3-D videos in 720p "HD" which can be viewed on any HDMI 1.4-compliant 3-D television via a mini-HDMI 1.4 cable. The camera is smaller and lighter, with lenses that appear slightly more recessed and with the "chrome" trim further away from the openings. This may help avoid reflections in side lighting and/or flash shots. The flash itself remains centered as on the W1, but seems to have some diffusion over it in the promotional photos from Fuji. (It's not known if the power of the flash has been enhanced.) For those who found the W1 lens separation of 77mm excessive, Fuji has compromised by reducing the separation of the W3 lenses two millimeters, to 75mm. And that left lens so close to the edge in the W1 is now a *little* further away from finger intrusions, but a small handle in the tripod socket is still a good idea.

Even more dramatic design changes are evident on the back of the W3, with a larger, 3.5 inch 3-D display screen and circular selector controls like many other digital cameras. The W1 screen is 2.8

This column depends on readers for information. (We don't know everything!) Please send information or questions to David Starkman, NewViews Editor, P.O. Box 2368, Culver City, CA 90231.



The new Fujifilm FinePix REAL 3D Digital Camera W3 has received wide attention from the consumer electronics industry press, thanks in large part to its easy compatibility with HD 3-D TV sets. The potential for prints or projection is rarely mentioned.



The bigger, brighter autostereoscopic screen dominates the back of the W3.

inches wide, with 230,000 dots while the W3 screen claims 11.5 million dots. Fuji also says the LCD is 1.5 times brighter, and color depth is improved by 1.8X. Best of all for those frustrated by trying to use the W1 in direct sun, the W3 has a brightness boost button that makes the display brighter until the exposure is made.

The display convergence control is now on the top left of the cam-

era, while the zoom control is directly in front of the shutter button. The W3 not only has image stabilization, but Portrait, Landscape, Sport, Night, Sunset, Snow, Beach, Underwater and Party modes! One seemingly simple improvement that *wasn't* made was the addition of a second strap eyelet on the left side of the case for attaching a neck strap. As with the W1, a neck strap can be

attached to a handle screwed into the tripod socket.

NOT known at this point is whether the W1 will remain available, and if the W3 will be able to "beam" image files via the IR port on top to other W3s or to W1s, or

if W1s can send pictures to W3s. Also unknown is how well supplies will meet the demand and what sort of distribution and promotion Fuji will provide this camera. The complete W3 manual is available at www.fujifilm.com/

support/3d/manuals/pdf/index/finepix_real3dw3_manual_01.pdf.

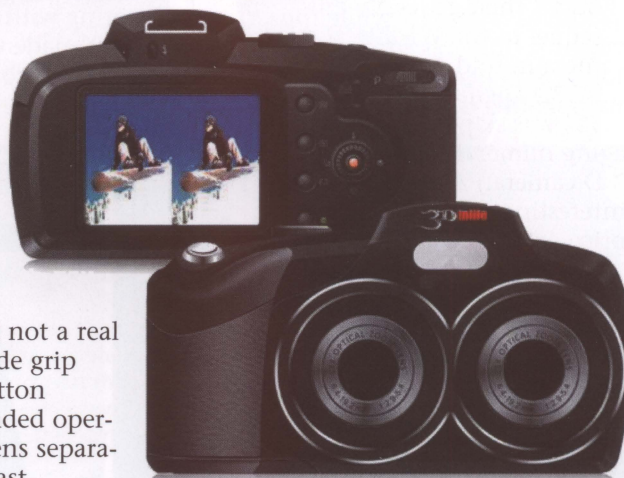
The W3 can be ordered from the Fujifilm website www.shopfujifilm.com/index.asp or from www.cyclopital3D.com.

Waiting for the 3D Inlife HDC-810

This much discussed camera from Inlife-Handnet Co., Ltd. in Shenzhen, China remains a prototype, but the company has been active in digital 3-D since its "3D DV & Player" was introduced in 2008 (SW Vol. 34 No. 3, page 29). That practically makes them old-timers in this field, and they are significant producers of autostereoscopic digital viewing screens. As yet, there is no price or importer mentioned for the HDC-810 camera, but its general design is close to what many of us imagined a digital 3-D camera would actually look like before the advent of the first Fujifilm prototype in 2008.

Among the features promised are a 2.8 inch 3-D display screen, image stabilization, 16MP for 3-D pictures, high definition 3-D video, a "high power" flash plus hot shoe

for an external flash and 3X optical zoom. It offers various manual shooting modes and interfaces via mini USB2.0, HDMI and AVOUT. Unfortunately, that dome on top is only to hold the flash and not a real viewfinder but the side grip under the shutter button would make one-handed operation possible. The lens separation looks to be at least 60mm. The specs simply list pictures as "jpg" so access to pairs is not defined at this point. See www.3dinlife.com/en/product4.html.



Does the 3D Inlife HDC-810 exist only as this drawing? What looks like an actual photo of the back has been seen, and confirms that there is indeed a hot shoe on top of what could be a pricey but tempting camera if it ever hits the market. The paired image on the screen is an artist's idea - the screen is autostereoscopic.

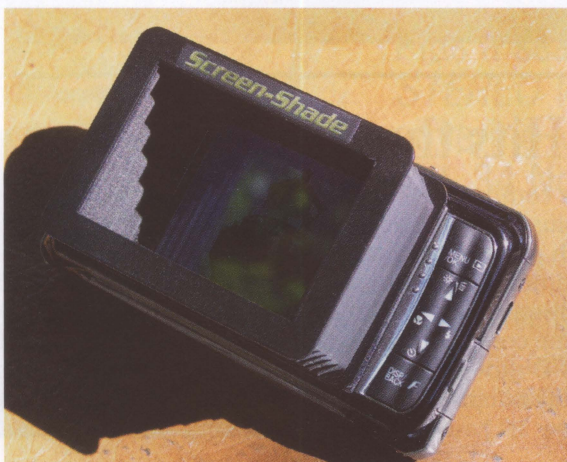
Shading the W1

Do shade devices help when shooting in the sun with a Fujifilm W1? This test shows that they can. In the non-enhanced view here, behind the reflection of trees and sky, the top of a lighthouse can be made out clearly enough

that such a scene could be composed using the shade. This bel-lows folding Screen-Shade is available from David Burder for \$28.00 postpaid via PayPal to Davidburder@googlemail.com. A tough, self-stick Velcro piece surrounds the screen

so that the folding shade can be removed for indoor shooting. There are of course times when no shade will help—such as when standing in the sun shooting into a shady scene and seeing only yourself staring back at you.

Screen-Shade on a W1 with a lighthouse view displayed on the screen in direct sun. The device extends easily and works reasonably well as long as the angle keeps all of the screen shaded.



Real Photo Prototype at NSA 2010

The "Real Photo" prototype digital 3-D camera seen and tested at the NSA convention in July is outwardly quite similar to a Samsung prototype seen at the January, 2010 Consumer Electronics Show this year. At 4.25 inches overall width, the lens separation is close to "normal" while the weight is only 130 grams. Resolution is 5MB per image and file format for stills is jpg (EXIF 2.2).

The AVI movie mode is 2-D only. The 7.0 mm lenses are fixed focus (1.5 meters to infinity) and the zoom is digital only. The LCD screen on the back is 2-D, and the sample being passed around at the Trade Fair had less than impressive images on its screen although shooting with the lightweight camera made the W1 feel more like a Realist by comparison.

Bundled with the camera at an expected price of about \$350.00 will be an autostereoscopic photo frame with a 6.25 by 4.5 inch "micro-optical lenticule" screen that uses the same power supply as used for charging the camera. Availability was expected in September, 2010 and more will appear here following production model deliveries.



The Real Photo digital 3-D camera as seen at the NSA convention in July, here compared to a classic Kodak 3-D camera.



An uncorrected pair directly from the Real Photo prototype camera, taken by George Themelis during the NSA convention in July at the Sawmill Creek Golf Course. (Instructions for deleting the date stamp were unavailable with the prototype.) Sharpness of the fixed focus lenses seems acceptable and the apparent magenta cast could be easily corrected, although lasting confidence in the very lightweight camera could take time to grow.

DLP 3-D Projection TV Hits the Road

If customers don't come to the store to see new 3-D TVs, the TVs will come to the customers in the form of a nationwide "3D Experience Tour" to showcase Mitsubishi's line of 3D DLP home cinema projection TVs. A 995-square-foot, 18-wheel tractor trailer will serve as a "Mobile Marketing Showroom" in which viewers can

see the company's lineup of 60-inch plus 3-D sets, including an 82-inch model with more than three times the viewing area of a 46-inch screen. The 3D DLP sets use the same core DLP technology as most 3-D movie theaters.

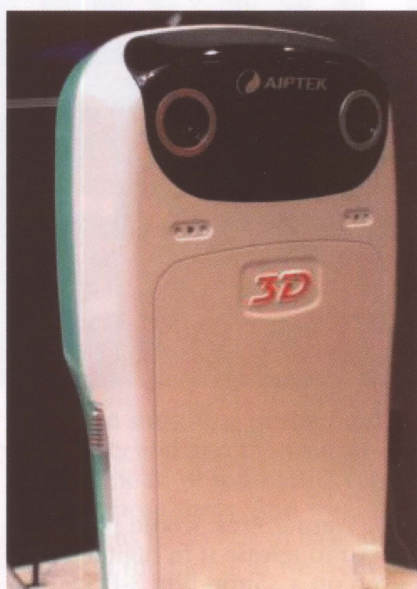
Also featured will be the company's new 3D LaserVue model, based

on the industry's only laser light engine for consumer projection systems. Stops included will be Carteret NJ (Sept. 21-23), Medford NJ (Sept. 24-26), Boston (Oct. 15-17), San Antonio (Oct. 22-24), Dallas (Oct. 29-31), Albuquerque (Nov. 5-7) and Tulsa (Nov. 12-14).

Digital 3-D at Under \$200

The Aiptek 3D-HD camcorder has started arriving at the homes of those who pre-ordered it, and we should have more details about it as well as some sample images by next issue. Its two 5-megapixels CMOS image sensors take still photos up to 5Mp and should be able to record videos with an HD resolution of 720p in 2D and 3D mode. A 2.4 inch autostereoscopic 3-D screen on the back at the top of this vertical device makes it resemble a cell phone camera, especially with the controls directly below the screen. Its overall dimensions are 118 x 72 x 23 mm and it weighs only 250 grams. Interocular distance is only 40mm. (This could be the ideal camera for *really* tight or risky situations where your W1 or W3 is just too big!)

The fully charged battery is expected to run about two hours and can be recharged over a standard USB connection. The USB connection will also transfer data from the camera to a computer, but we will need to wait for details on how easily this is accomplished, what platforms are compatible,




One page of the Aiptek website (www.aiptek3d.com) identifies this as the "i2" but not the Aiptek home and ordering page, so the name may not be final.

and the file format involved for stills. For 3-D video, an HDMI connector to directly connect the camera to a 3D-ready HDTV is available.



The back of the Aiptek truly resembles that of a cell phone camera, which is how it would be held in use.

The Aiptek (pronounced *apetek*?) is \$199.99 from www.aiptek.com/WhatsNew where an eight-inch LCD autostereoscopic 3-D screen can also be ordered for \$229.99. 

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Turning the Interaxial Knobs

An Interview with Rob Engle

by Ray Zone

In 2004, Rob Engle, a visual effects artist and supervisor at Sony Imageworks, was tasked with converting *The Polar Express* for stereoscopic release on IMAX 3D. By 2009, Engle had supervised the stereo conversion of eight CG (computer-generated) 3-D feature films. In the following interview Engle provided an overview of the technical challenges encountered in overseeing aspects of stereoscopic production for many of the most prominent digital 3-D cinema releases, both for Sony Pictures as well as other motion picture studios.

Zone: On this whole idea of “screen-safe” parallax values for 3-D, you have a unique history with stereo because your first 3-D movie was *The Polar Express* which you were in charge of repurposing to IMAX 3D, and in IMAX 3D only. Subsequently, you’ve come into the post-*Chicken Little* world, which is Phil McNally’s world of conservative parallax values for theatrical 3-D. So there are parallax values in *Polar Express* that you may have green-lighted that you wouldn’t today.

Engle: Absolutely. It’s funny because I was just looking at our demo reel. It features the eight 3-D films that we’ve done. It’s got every one of them. And I found that *Polar Express* was the hardest to look at. And that is because it is so deep.

Zone: I’m sure that after the success of *The Polar Express* in IMAX

3D, Warner Bros. would have loved to release it in digital 3-D, even on a 35mm film 3-D platform theatrically, but IMAX had the exclusive rights to the 3-D version.

Engle: That’s my understanding. Stereo in all its forms is really cool, as long as it’s done well. My concern is that we’re entering a phase where all the filmmakers are getting involved but they don’t necessarily have the guidance to make good 3-D.

Zone: But you’re instructing filmmakers about stereo at the Sony 3D Tech Center.

Engle: The 3D Tech Center at Sony is educating people about what makes good 3-D. And I think that’s tremendously valuable. But that’s not going to stop more quickie conversions or more filmmakers who just want to throw stuff at the audience.

Zone: Throwing stuff at the audience is going to be an enduring modality, especially in 3-D horror films.

Engle: I’m concerned even with horror films. When you’re talking about narrative cinema, anytime you use overt negative parallax, you have the potential for taking the audience out of the narrative. You’re reminding them that they’re watching a movie. And most filmmakers don’t want to do that.

There are two genres that, I think, really benefit from that. One is comedy and one is horror, where you literally are building

up tension and then you release it. And that release is a great moment to have something in your face. And then come out of it. You’ve got to get right back into it.

But if you’re in a dramatic story, like *My Dinner with Andre*, and every once in a while you just picked up a dinner roll and threw it at the camera, that would be ridiculous. It would be distracting. It’s all about place. And that’s it. To me, I think *My Dinner with Andre* would actually be a fascinating movie in 3-D. And someday it will get made.

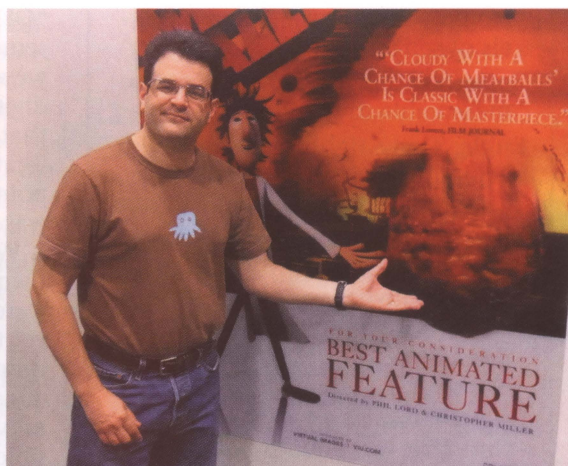
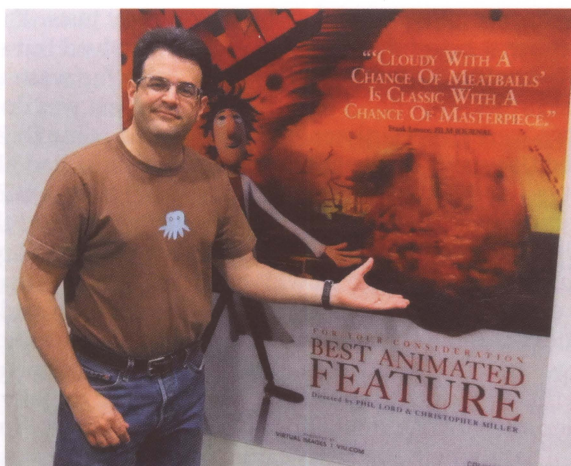
Zone: *Dial M for Murder* is *My Dinner with Andre* with scissors. But even that scene doesn’t really take you out of the narrative. It increases the suspense, which is the intent of the scene.

Engle: But even in 2-D, with the choice of the focal length of the lens, those scissors come out at you.

Zone: Before *Polar Express*, which kind of dropped on you like a bomb, what interests in 3-D did you have before that?

Engle: I wasn’t particularly interested in stereo filmmaking but I was always drawn to the medium of 3-D with View-Master which is something I collected. But I’m not one of those people who has been a stereophile for my whole life. So it really was the first test that we did on *Polar Express* when I saw that this was a revolution in the making. And I do believe it is a revolution.

Rob Engle catches a lenticular meatball falling from a lobby poster for *Cloudy With A Chance Of Meatballs*.
(Stereo by Ray Zone)



Certainly you can say that all we're doing is adding one extra dimension but I think the way in which cinema changes and the way you look at filmmaking, how you can use film to tell stories in a new way, is revolutionary. And I do think the fact that so many filmmakers who are interested in looking at 3-D film say "Oh, wow! My movie looks different." We have done test conversions of 2-D films and every filmmaker I've talked with has been blown away by how different their movie looks in 3-D.

Zone: What were the main tools, primarily software, that you used to create stereo on *Polar Express*?

Engle: For *Polar Express* there was nothing off-the-shelf that we could use. For a long time nVidia had support for scientific visualization with their graphics card. Our entire software platform at Sony Imageworks is based on the Linux operating system and custom software. So we took two projectors, 1280 x 720 in resolution. We set up a 10 foot silver screen and linear polarizers in a room with two Linux workstations and then we modified our in-house image viewing software to support stereo. What was important about that at Imageworks at the time was the fact that we had already built up a huge infrastructure in order to make movies using this viewing software. We could take cuts from the Avid system, import them into our viewing software and with individual shots we could swap out different takes of a shot. So we might start off loading the animation of the movie and then

we could substitute in the most recent version and then substitute in the most recent 3-D version of those shots. And what it allowed us to do was to basically build up the movie as we went. That was very important because 40 percent of the movie was already done in 2-D by the time we started working on making it 3-D.

The main technological innovations on *Polar Express* were twofold: one was the viewing environment which was the two projectors using our viewing software and the other was basically taking software we had developed ages ago on *Godzilla* and re-tasking it for this purpose. What I'm getting at is this: say you do one render for your movie and now you want to come back to it. And you want to re-render it. Well, in the current day and age, technology moves so fast, that between the time that you render a shot and maybe two weeks later, you may not be able to render it and get the same picture. As you know, in 3-D it's very important that your two eyes match. So if I render my left eye and then I wait two weeks and somebody's changed the shaders or they've changed the textures that are on a character and I now render the right eye, all of a sudden there are two images that may not match.

So, we developed some software that at the time you render one picture, takes a snapshot of the entire state of the system at the time that the picture was taken. And the innovation for *Polar Express* was the ability to say

"Now we want to roll back time and we want to render our right eye but using all the settings that were used to make the original left eye."

Zone: A system archive.

Engle: Conceptually, that's exactly what it was. We called it "versioning" and "publishing." The idea was to keep track of the versions of the individual renders that we did and, along with those versions, we kept track of all of the inputs that were used to make it, as well as the commands that were used to make it. We literally could go back to a frame and, if somebody accidentally deleted a frame, we could re-render it. And we would get the same picture.

Now, that's a very broad stroke for a very complicated system that, of course, sometimes breaks, but ultimately that was the technology that was needed for *Polar Express*.

Zone: With *Polar Express*, were you basically rendering parallel optical axes with no use of convergence since it was for IMAX 3D?

Engle: That's right. We in fact did not have convergence controls on *Polar Express*. It was just, literally, interocular or interaxial spacing and that was it. And what we would do was to measure the parallax with the imaging software in the resulting image, and for *Polar Express* it was actually a very straightforward process where we had a target parallax value that we were shooting for with different kinds of scenes, different kinds of shots, and I would tell the artist how many pixels of separation I

would want, maybe 15 or 30 pixels of separation.

Zone: So your parallax values were measurable in pixels?

Engle: That's right. And we would actually have the artist with the camera set things up and measure the value and then scale the interaxial to match that.

Zone: And what were your metrics for how it would project on the IMAX screen while you were working?

Engle: We used a technique at the time that was advocated by Hugh Murray. Hugh was basically our technical guy. The two projectors that we had were set up with a two and a half inch offset and that would push the 3-D into the screen so the IMAX stuff would look correct. Our metric to was place ourselves inside a 90 degree field of view that I estimated the IMAX screen would take as a cylindrical configuration and I would judge it. We did a number of tests early on to make sure that we could translate mentally, just to get an idea of what it would look like in IMAX. But beyond that we did probably a minute and a half of footage and after that the first time I saw it on film was when we were checking the prints. Since it was film-based, we tested and looked at everything digitally and then that was it. Then it went to 70mm.

Zone: So, what did you feel when you first saw it in dual 15/70mm 3-D?

Engle: I was stunned. To some extent it was what I expected since I'd seen the movie a hundred and ten times through. But I think my first reaction was overwhelming relief. As I recall, I said

"OK, there it is. We're done!" I remember it being darker. When we were doing our work on the digital projectors I don't know that we were necessarily color calibrated. It wasn't really, at that point, so much about color as it was about parallax.

What we were doing was what I would call "stone-age" now. We were doing what we could just to get the 3-D movie made. At the time we had five months to produce the 3-D for the whole movie. At that time it felt impossible. That's where the relief came from in seeing it on the screen in IMAX 3D. Interestingly enough, there were moments where there were mistakes that I saw, and just kind of moved past it.

Zone: Probably, nobody noticed?

Engle: There were a couple of shots that ended up being 2-D that shouldn't have been. But overall, I was just really thrilled that we had finished it. You have to remember, at the time it was a big experiment. We had no idea how it would be accepted or if anybody would come see it. What's been really interesting in retrospect is that now some people look at it and say "That's the thing, the straw that broke the camel's back and reintroduced the wave of 3-D."

The way I look at it, cynically I suppose, is that it made something like a quarter of its revenue on two percent of its screens. The money people woke up and said "Wow! Look at that."

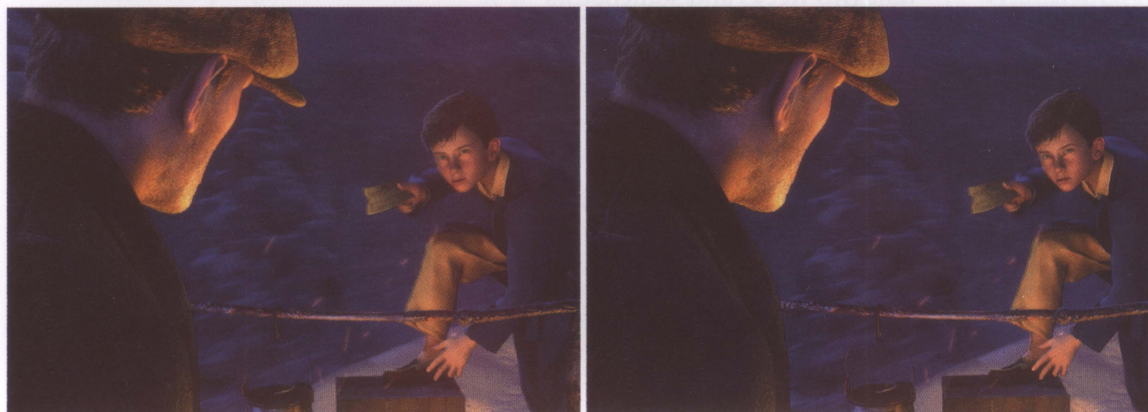
Zone: How much input, if any, did Zemeckis have on the stereoscopic version?

Engle: On *Polar Express* he had very little input. He looked at the

early tests. This was before I got involved but my understanding is that he was very much the reason why it was done in 3-D. IMAX had come to Zemeckis and Warner Bros. had already done *NASCAR 3-D* in IMAX. Zemeckis wanted to do this. And the studio supported it because they had already had the experience. After some early tests, Bob said "Yes, let's do this" and the studio agreed. That's when I came onboard. But I never actually met Zemeckis until we started *Beowulf* which was three years later.

What's interesting is that any other filmmaker might not have been as successful. And the reason I say that is because Bob has this compositional style in filmmaking that just lends itself to 3-D. He uses these really long shots that keep the camera moving. So there are many "extra keys" that keep the camera moving, like the ticket shot in *Polar Express*. But even with dialogue scenes he'll keep the camera moving. He also composes deep. He composes with things that are in the foreground and the background. Usually they're not distracting things in the foreground. It's not something that's in the shot for no reason but it's something framing the shot. Or it's somebody that's contemplating conversation in the background so, yes, you do want to look at that person.

The point is that without Zemeckis even necessarily planning and making a 3-D movie, *Polar Express* lent itself to being 3-D. By the time we got to *Beowulf*, which was his second 3-D feature, he had produced *Monster House*, but he wasn't involved with that on a creative level. By



.....
A hobo camp scene
from *The Polar Express*.
© 2004 Imax Corp.
.....

the time we got to *Beowulf*, we had our early conversations with him about the film. We shot tests and showed them to him and asked him what he wanted to do since this was now his first digital 3-D movie with RealD in the theaters as well as IMAX. Then Dolby 3D also came along at the end.

Zone: Yes, *Beowulf* was the first multiplatform 3-D release since it was released on IMAX 3D and digital 3-D cinema with both RealD and Dolby Digital 3D, as well as 2-D on film. Up to that point that hadn't happened.

Engle: That's right. Up to then IMAX was always exclusive with the 3-D version.

Zone: In between *Polar Express* and *Beowulf*, you had done *Open Season* and *Monster House*.

Engle: Yes.

Zone: By the time you had finished *Polar Express*, did you know at that time that you were going on to another stereoscopic project?

Engle: No. Because at that time there was still this question about "What was the future of 3-D?" *Polar Express* came out in late 2004 and *Chicken Little* came out almost exactly a year later. So late 2005 was the first digital 3-D release.

Zone: So in between you worked on 2-D?

Engle: Yes. I worked on *The Lion*, *The Witch and The Wardrobe* in between. Then *Monster House* came along which opened in only 170 digital 3-D theaters. And there were people who asked "Why did we do that?" We couldn't really get enough market or enough theaters to justify the expense. And *Open Season*, which was another release in 3-D only on IMAX.

What we'd been seeing was that everybody was gradually adding more 3-D theaters because they knew *Avatar* was coming. And, sure enough, now we've got enough 3-D theaters at least for one 3-D release at a time. Now people are willing to really get in there because they can have a wide release 3-D movie, whereas before, in 2007 you really couldn't do that.

Zone: When you started working on *Monster House*, you must have seen *Chicken Little*, and did you have an opportunity to talk to Phil McNally about conservative parallax values for digital 3-D cinema and a different approach than you would use for IMAX 3D?

Engle: I don't think we specifically had that conversation. Mostly Phil and I know each other because we usually end up together at a lot of these [industry] events on panels. Over the years we've forged a friendship. For the most part we're both busy working so we don't really connect all that much. The reason the parallax values ended up more conservative on *Monster House* was that we felt the vertical surround was going to be problematic and we didn't want to play the movie gimmicky. I had conversations with the filmmaker and we all agreed that this was going to be a movie where you would enjoy the richness of the environment and not have things thrown at you. We also wanted to experiment with 3-D storytelling and pacing.

With *Polar Express* the 3-D was very uniform in its treatment all the way through it. There wasn't much creative use of 3-D. In *Monster House*, what we wanted to do was to build it up. We wanted to start it off very mellow and then, every once in a while, when the house became alive we would amp up the 3-D. In the third act when the house comes alive and starts to tear apart the neighborhood, that was when we decided to crank it up. So it was very much a conscious effort to experiment with the idea to make it easy on the audience early on and then later to ramp it up.

We tried some experiments, I think, that really didn't work on that film. One example is a shot when the first time the boys see the house, before being a monster, when I pulled a rack interaxial during the shot, fairly dramatically and adjusted the convergence so it would stay at the same spot. The gag was a lot like a Hitchcock zoom-and-dolly.

Zone: I disagree. I think it worked. And I think the audience

responded emotionally even though they might not have noticed it consciously.

Engle: I'm glad you say that.

Zone: *Monster House* was before *Meet the Robinsons*. What about the floating window?

Engle: I wasn't even aware of the technique. And I credit Phil [McNally] and Lenny [Lipton] for that.

Zone: *Meet the Robinsons*, I think, really marks the conscious use and development of the dynamic floating window.

Engle: Absolutely, and I think Phil and Disney made some innovative strides along the way. In some cases, we were kind of leapfrogging each other. The multi-camera technique, for example, was something we used on *Open Season* to small effect. We didn't have a pipeline which made it easy for us to render different parts of the scene using varying interocular values on different cameras. But what we would do would be to render different pieces of a shot with different cameras and kind of fit it together.

Zone: You almost backed into it then.

Engle: Exactly. The ability to do multicameras on a wide scale for us wasn't until *Beowulf*. But on *Beowulf* we just pulled out all the stops and there was a lot of interesting stuff going on with that film. But basically, *Open Season*, used multi-rigging or multi-camera stereo.

If you look at the creative use of 3-D, I think that *Monster House* was probably the best, and then *Open Season* was a very quick project. We only had three months to do the whole thing. So there wasn't a lot of time to do creative 3-D. It was more about how quickly could we get it finished into 3-D. The movie had already been finished as a 2-D film.

Zone: So you took the assets and repurposed them for stereo? And that had to be at a pretty fat file size for IMAX?

Engle: We were still working at 2K.

Zone: Really?

Engle: Yes. Everything we've done for IMAX has been 2K renders

which they use their DMR (digital remastering) to blow up.

Zone: It probably helps that the imagery is CG.

Engle: Yeah. IMAX has their process where they blow it up and sharpen it a little bit. Actually, on *Polar Express* we saw some problems with the sharpening. But most people didn't notice it. The point, though, is that when we got to *Beowulf*, we had time. I think we had almost a year before we even started production on *Beowulf*. So I went in and said "Look, I want to use these techniques. I don't know how I'm going to use them, but I want to use the techniques. I wanted to be able to use the floating window. I didn't want to use diagonals because I find that a little bit distracting. I wanted to be able to use multi-camera rigs wherever I wanted. I didn't want to be limited with that."

Zone: With the multi-camera rigs, didn't you work with very close tolerances of the interocular values in the multirigging. How did you calculate those?

Engle: We usually had a specific parallax value we were targeting. If we targeted a parallax value of, say, 15 pixels, we would have the artist set up an interaxial to hit that value. We would look at the shot and determine what we wanted.

Since we knew *Beowulf* was going to be both a digital 3-D release and an IMAX 3D release, we conceptually created the movie with parallel cameras. We were actually creating an IMAX 3D movie but we knew that when we were delivering it for digital 3-D we were going to have to add a horizontal offset to images baked into the master to compensate for the screen size based on a typical digital theater. So, conceptually, we built a parallel movie for IMAX 3D and then we reconverged it for digital. That was how we dealt with the two release formats. That meant that the IMAX version did not have floating windows and the digital one did. What that meant for the people finishing the movie was that they had two 3-D versions of the movie to deal with. They had an IMAX version and a digital ver-

sion. They hated us for it. Because they had to do two color passes.

Zone: You were getting them ready for *Avatar*.

Engle: Exactly. Boy, were they getting ready for *Avatar*.

Zone: Now, with the multi-rigging and different interocular values, did you animate them during a single shot?

Engle: Absolutely, especially when you're talking about a Robert Zemeckis movie where the shots are really long, the cameras are moving, the subjects are coming in and out of frame, you can't get away with a static interaxial value and come up with something that is interesting for the whole shot. So, we would typically animate the interaxial values. We try to avoid it if we can because I feel strongly that it's nice to have the space changing all around you, to have people walk towards you and feel like they're getting closer to you. But with the space changing as much as it is you have to animate it. I would guess that on *Beowulf* 30 to 40 percent of the shots had animated stereo bases.

Zone: What were the biggest numbers of multi-rigs you had in a single shot?

Engle: I think we had 5 or 6 stereo-rigs in one shot. There's a scene that takes place on a beach where *Beowulf* is confronting this guy. Now, this is unusual, but for whatever reason, Bob used an incredibly long lens on this shot, a 200 millimeter lens. And the whole point of this scene was that *Beowulf* was getting closer and closer to this guy, pushing him closer and closer to the waterline, and invading this guy's space, just really intimidating him. Then we cut to this shot where it's the 200mm lens and, for whatever reason, they placed all the characters really far apart. And in 3-D they all turned into cardboard. All the characters turned into flat planes. And they felt far apart. So we had to go, literally, into that shot and tune each person to make it feel intimate again. Otherwise, it would have felt, all of a sudden, that they were no longer in the same world. So it was actually a use of

the tool to solve a technical problem with the way the scene was shot.

Zone: With hypo and hyperstereo, relative to the interaxial values, how much, if any, thinking was there about a sense of things appearing smaller or miniature, as with hyperstereo, or looking and feeling larger, as with hypostereo?

Engle: For *Beowulf*, I specifically wanted to play an experiment with the use of roundness of a character to emotional effect. What I did was to say, "Let's play with the idea that a character is in a position of power or strength, or believes that they are, then they would feel more round. And characters that were in a position of weakness would be flatter. That was, again, where the multicamera rig came in a lot. We would play *Beowulf* more round and whoever he was talking to would be a little more flatter."

As far as taking whole scenes and going hyperstereo on them, we did it on occasion because there were some shots that Zemeckis would do like these sweeping moves. There's one early in the movie where we pull out of the mead hall and go all the way through this long plane and back into Grendel's lair. And the shot just becomes kind of boring if you don't go a little hyperstereo. So we would do that. I'm a little less sensitive to the phenomenon of miniaturization. I see it less than a lot of people do.

Zone: It's very subjective.

Engle: There are probably cases in *Beowulf* where we went too far, but I don't know what they are. I know in *Open Season* that we had some shots in IMAX 3D where we definitely miniaturized the characters. But I think I've become more practiced with that over time.

Zone: I don't think it's quite the issue that "tech geeks" make it out to be. It can actually be charming and effective when used dramatically.

Engle: It depends. You know on *G Force* we had a giant robot that was attacking a bunch of

humans. My instinct, because this was Disney, and because they had told us that they wanted it to be "in-your-face" 3-D—they actually told us they wanted people to remember it as 3-D more than it was about anything after having seen it—you gotta go "Really?"

So, going into that I thought, this robot doesn't feel very dimensional so let's crank it up. Let's do a 20 inch interaxial and see what that looks like.

Zone: So did you have a calculator to convert pixels to inches and I assume these would be onscreen inches?

Engle: No, what I mean by inches is between the cameras inches. So, what we were doing was to turn the interaxial knob and it's actually measured in centimeters but the point was to make it much wider than any human level would be.

Zone: All of this was really elaborated by *Meet the Robinsons*. Now, by the time you got to *Beowulf* did you have something like a depth script for the story? You had already started doing that with *Monster House*. How much of that did you do with *Beowulf*?

Engle: Depth script implies that its something written down. I've seen these drawings that Brian Gardner has made mapping out the depth of the movie. I don't really work that way. I'm more in my head. I look at the movie. I talk to the director and I ask them "Are there moments in this movie that you particularly want to emphasize?" On *Beowulf*, for example, we tended to play dialogue scenes slightly more relaxed at the screen maybe just in front of the screen so that it gave the audience at opportunity to relax. And we would play the action scenes a little more dynamically in terms of really getting some depth. With Grendel reaching out, for example, his arm would come out of the screen. We would map it out, but it wasn't written down. When you have one person who is over-seeing the whole thing, then you can do that. Obviously, if I get hit by a bus, then the depth script goes with me.

But the idea was that we were definitely mapping that out. We

were thinking about it even though it was never an artifact I could put in a museum.

Zone: I think *Cloudy with a Chance of Meatballs* was probably underrated in terms of its achievements. Tell me about its stereoscopic innovations. What kind of stereoscopic thinking was brought to that?

Engle: First, you should know that I was co-supervisor on the project. What happened was that I got started on the project and then *G Force* came along. With *G Force* there were multiple vendors involved with the 3-D and because of the technology involved really needed more babysitting. *Cloudy* was more of a straightforward CG film. So about halfway through it Grant Anderson came in. He's somebody I had worked with on *Beowulf*. Up to now, I have worked as a stereographer in the traditional creative sense with the use of 3-D but also the finishing supervisor, the guy who looks at every image and makes sure it's good enough to go out the door. Those are two different roles. One is how you use 3-D. And the other is technically about making the show look good enough.

Grant Anderson had served in the role of helping me with the technical part but had not served in the creative use of 3-D part. When he came back we had plenty of layout artists, who were the ones actually turning all the knobs. I just don't want to make it sound like I did *Cloudy*. It was a combined effort between Grant and I.

Basically, since *Cloudy* was a comedy, we wanted to use the 3-D to play the punch lines. We wanted to take advantage of food and weather. As you know anything that uses an atmospheric effect in 3-D plays really well. So we wanted to play up those moments. A good example is the sequence after Flint's devices are flown up into the atmosphere, and he's on the dock dejected, I personally had influence on that scene. What we did was to play it really relaxed through the whole thing and then as he starts to realize that the machine is raining burgers, as that happens,

then we amped the 3-D up. The whole idea was, again, to give the audience a chance to relax and support the movie emotionally. Since Flint felt dejected, he felt flat, we let the scene play flat without actually being flat. Then we amped it up. Then we had the burgers flying in people's faces. We didn't go too far, though. Because we could have really turned it up more than we did. We wanted people to get the sense of the grandeur of that moment, of the joy to Flint of knowing that his invention had worked, without making people having to take off their 3-D glasses and be pummeled. So there was a tradeoff there.

Zone: With the use of motion blur, an artifact of film running at 24 frames per second, do you think as much motion blur as was used in *Cloudy* was necessary?

Engle: I don't recall motion blur in *Cloudy* as too much. What I can tell you is that I think that with *Monster House*, the movie, I thought, was not served well by the lack of motion blur. It needed motion blur. The intent of the 2-D version of the film was that it should look like stop motion animation from the point of very narrow depth of field. If you saw the 2-D version of the film, the depth of field was so narrow. One of the other artifacts of stop motion is that its stroboscopic, it doesn't have motion blur. When we went and did the 3-D, I felt it didn't look very good without it. So we actually tried to introduce motion blur to the 3-D version of the movie. I felt it was distracting without it. I think strobing in 3-D becomes exaggerated by the depth.

Zone: The temporal intermittency of the RealD projection might also be a factor.

Engle: Absolutely. I think there is a combination of factors that make a lack of motion blur harder to watch in 3-D and more confusing visually. Typically in *Beowulf* we would do a 50 percent motion blur. It's interesting because *Cloudy* used the same renderer as *Monster House* but at the time we couldn't do motion blur with that renderer on a cost-effective basis. Despite the fact that it was

a creative choice on the part of the director, making it look like stop motion, we couldn't have made motion blur anyway at the time with that renderer. We would have had to use a different renderer.

Zone: Tell me about your use of occlusion of the black surround with negative parallax on *G Force*.

Engle: Or, as we call it, breaking the mask. With *G Force*, Disney had the mandate for us that they wanted the film to be a real 3-D experience. The director Hoyt Yeatman had experience with special venue projects. He had an affinity for that kind of material. The movie was already going to be a 2.35:1 release. So, we had actually had some mistakes in *Beowulf* with the floating window where things would actually appear in front of it and, at the time, I thought it looked kind of interesting. So, I filed it away.

When it came time to do *G Force* and we were confronted with this very restricting top and bottom and had to do everything within it, we found that certain shots just didn't work. A perfect example is the shot where there is a snake lunging at the camera and the animators wanted to get that snake's jaws to open and break top and bottom. In the 2-D release of the film you just don't see the top and bottom of the jaw. I said to Hoyt, "You know this is an opportunity lost. We really could take advantage of the fact that we were a digital release and that there was really nothing wrong with projecting 1.85:1. Why don't we do this?" We started off talking about it on a per-shot basis, talking about handling individual shots different. But the problem with 2:35 is there's not much room to mask closer in. But it gave us a canvas we could use every once in a while. And the visual reference was the snake shot and we did a test. We showed them a poster for *Bwana Devil* that shows a lion breaking out of the frame. We pointed out that this was actually what we were doing. And Disney loved it, they loved the idea.

Then the challenge, as with all things gimmicky with 3-D, was to find the right time to use them so

they weren't distracting. And not overused. So again, going back to how we handled *Monster House*, we started off slow. I think the first time it becomes really obvious was when there was a cable that was going off into space and the cable breaks the frame. But the real obvious one was the snake. That's the first time you go "Wow!" And then we used it every once in a while. Then at the end of the movie we just cranked it up. We were just using it all over the place, with sparks falling over the edge. Most of the time it's subtle. You don't really notice it. With one shot you're looking up at Darwin and he dangles over the edge of the frame. He looks like he's in audience space.

The other reason why it was important to use it is because Disney was so much about getting the audience to feel that the movie was deep. They were thinking just bring everything out into audience space. And I was thinking that was going to give headaches. So this was a technique that gives us another visual cue but we didn't actually have to have the parallax values be very high. You can mask it out and it will look like it's in audience space even if it's at the screen. So it was kind of a way of cheating because Disney wanted it deep and I didn't want to give them painful.

Zone: So they thought it was deep when they saw it.

Engle: Well, it looks deep. It looks like a deeper experience. I don't know that it should be used on everything.

Zone: I think it should be used more. It references Eisenstein's dynamic frame. There's no reason not to use it, no reason not to have a continuously changing aspect ratio for the stereo.

Engle: You know I kind of wished that we had tried it on the sides. But I don't think an opportunity came up.

Zone: Well, that's what your dynamic stereo window is all about. Tell me about your work on the *Jonas Brothers 3D* movie.

Engle: I did some visual effects for the *Jonas Brothers 3D*. What was

most illuminating for me about that experience was that I found you could shoot live action 3-D that has a geometric problem. The left and right eyes may not align properly. Or maybe one eye is out of focus. There was some of that. This was a documentary style.

Zone: Certain live action 3-D technologies may have that problem occasionally.

Engle: Yeah. That can happen. But what amazes me is that the human visual system is really good at adapting to those kinds of things as long as they're not too extreme. For example, we had a whole week on *Polar Express* when our projectors were misaligned vertically. And we didn't even know it after we put on our glasses. After a while we realized it, but the point is that the brain is really good about fixing this.

But what I learned on *Jonas Brothers* was that as soon as you introduce graphical elements that are perfectly in alignment but don't match the misalignment of the original [stereo] photography it causes brain shear.

Zone: That's Cameron's term.

Engle: Is it? Oh, then I adopted it from him. Am I using it the same way he is?

Zone: Yeah. It's basically pain, visual pain.

Engle: Perfect! Then I love the term. The point is that with the kinds of 3-D movies that were done back in the 50s that didn't heavily use visual effects, you could get away with misalignment, along as the projection was good.

Zone: There was forgiveness.

Engle: Yes. But now, where there is a huge amount of visual effects, the level of quality needed in the photography, or at least in correcting the photography before you get to the effects, is so much greater. That's one of the things that I'm really interested in watching as we move forward. How do we deal with that? Obviously Cameron had to deal with that with *Avatar*.

Zone: There is software in development, like the Ocula plug-in for Nuke, that will keep an eye on that and correct it on the fly.

Engle: The trick is that some things can't be corrected. Imagine your cameras are radically key-stoned with vertical parallax differences that shouldn't be there and no matter what you do you can't fix it unless you really go into the image.

Zone: The fix itself might introduce errors.

Engle: You effectively have to turn the fix into a stereo conversion. The other thing, from *G Force*, is the idea of a hybrid film where you are switching back and forth between conversion and renders. Because about 20 percent of *G Force* was fully CG, 20 percent was fully live action and there was this 40 percent hybrid in between that was sometimes CG on a plate and sometimes on what we call a hyperplate, where we were making the plate up as we went along from the photography. It was kind of like *the Matrix* where they did "bullet time." They built up an environment and they could move the camera around in it. We were doing that for about 20 percent of the movie.

I felt that the challenge of *G Force* was to be able to move smoothly between those different worlds, those different types of photography and not have the audience know it. I think we were moderately successful in that.

Zone: No, I think you were successful.

Engle: It will be interesting because there's this whole conversation about stereo conversion as we move forward. People may say "Conversion is bad. Conversion is fake 3-D." But I'm going to be very interested in seeing how we move forward as an industry and just recognize that as a tool.

I think it's a really exciting time. I've been really excited to work with a variety of filmmakers and they're excited to find out about what 3-D can do and what they can do with it. I'm excited because there's so much interest in it and because we can innovate. 🎬🎬

O'Sullivan's Survey Views Examined

(Continued from page 21)

therefore I believe that the manuscript caption on the others correctly identifies them. Using the list from appendix 1, the negatives in the National Archives and those I have on plain unprinted mounts I can identify at least 194 different stereographs from the King survey. This still leaves a fair number unaccounted for!

Appendix 2 through 7 catalogs six different series issued by Wheeler. There was at least one other War Department mount issued for the Wheeler survey beyond what Carol Johnson has cataloged. It is a mount that lists multiple years on the left margin (see figure 4). There is a valid reason why she did not include this mount. The few I am aware of do not contain a series number nor do they have a caption or photographer credit. The photos that are on these mounts can easily be identified as views from the Wheeler survey but it is rather difficult to list or catalog something that has no item number, name, title, caption or anything to specifically identify it or correlate it to something. The stereographs listed in appendix 7 have no series number but they do have a caption and are cataloged chronologically by year and then alphabetically by name. It is my belief that these multiple year mounts exist only as a prototype of what was later redesigned to become those listed in appendix 5. The redesigned mounts were printed with exactly the same information except that they had only one year printed on the left margin (see figure 6). This was the only Wheeler survey series that did not have a caption printed directly onto the mount; it was instead printed as a paste-on label and then adhered to the back of the mount (see figure 7). This is why the multiple year mounts have no caption; they were to use paste-on labels but were rejected in favor of a mount with only one year printed on it. Therefore, likely, very few of these mounts exist.

One other item further convinces me that the mounts with multiple years printed on them were a prototype of the single year version. The reverse side of figure 4 is shown in figure 5. Note that it has a hand stamp impression which reads "U.S. Engineer Office, Explorations and Surveys West of the 100th Meridian" and is dated May 19, 1874. O'Sullivan went off Wheeler's payroll in May 1874 and went under contract to print his survey photos. William Stapp writes in his chronology of O'Sullivan "May 9 [1874] Wheeler accepts his [O'Sullivan] bid to print and mount stereo views from the survey negatives for \$80 per thousand, and to print and mount the large views for \$90 per thousand, the work to begin immediately." The stereo views mentioned here would have included the ones listed in appendix 5. O'Sullivan printed stereo views and large plate views starting May 9th (or very shortly thereafter) until sometime in early July 1874 when he went back on Wheeler's payroll and headed West for his final season in the field. He resumed his printing in April 1875. The date on the back of this stereoview is from very early in this printing contract. I am guessing that Wheeler rejected the multiple year format in favor of a single, specific year very early on, and none of the multiple year mounts were ever used in an actual series.

Again I invite comment; does anyone have (or know of) multiple year mounts with a caption label on the back? Does anyone have any of the missing numbers in the King series? I will also make mention that in my last communication with Ms. Johnson that she indicated the appendixes will be updated and made available online at the Library of Congress, Prints and Photographs Division's web site soon—I will notify *Stereo World* when this occurs. I can be contacted at DanSherman@oikosmedia.com. 🎬🎬

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ALASKA & KLONDIKE stereos needed, especially Muybridge; Maynard; Brodeck; Hunt; Winter & Brown; Continent Stereoscopic. Also buying old Alaska photographs, books, postcards, ephemera, etc. Wood, PO Box 22165, Juneau, AK 99802, (907) 789-8450, dick@AlaskaWanted.com.

ANY IMAGES of Nevada City or Grass Valley, California. Mautz, 329 Bridge Way, Nevada City, CA 95959, cmautz@nccn.net.

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GERMANY stereoviews wanted. Preferably made by German stereographers between 1860-1920, but also Kilburn, Underwood and White views. Klaus Kemper, Kommerscheidterstr.146, D-52385 Nideggen/Germany. Offers and scans to ddd.kemper@t-online.de.

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PITTSBURGH (region) and Allegheny City, Pennsylvania. Scenic, city & industrial stereo views. Photographers, Studios, dark tents, photo wagons. Round Kodak photos, interesting daguerreotypes, including jewelry. ngraver@rochester.rr.com N.M. Graver, 276 Brooklawn Dr., Rochester NY 14618.

REALIST SLIDES OR STEREOVIEWS of the "Guild Inn" Scarborough, Ontario, Canada, aka "Guild of All Arts", "Guildwood Park", "the Studio" "Ranelagh Park" and "HMCS Bytown II". I know a couple took Realist slides in 1956 and these may be in your collection. Actual slides or HQ scans. timo.puhakka@bellnet.ca.

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STEREOS, or scans of views, by Victor Albert Prout needed for research project. Please contact Paula Fleming, britishstereos@hotmail.com

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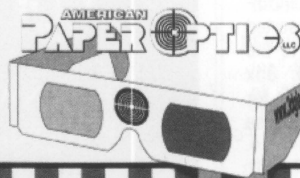
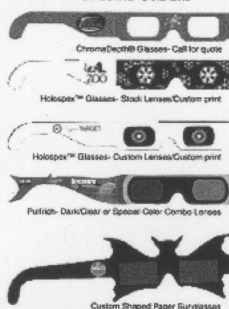
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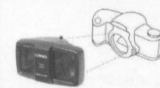
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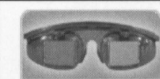
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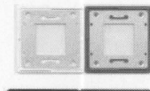
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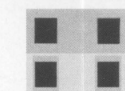
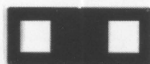
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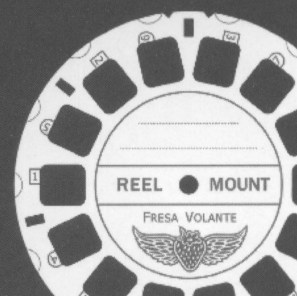


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